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PRESIDENT'S ADDRESS

PACIFIC COAST SOCIETY OF ORTHODONTISTS

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BY TRADITION and by precept it is mandatory that the president deliver an address, expressing his ideas, making recommendations for future administration, and commenting upon the activities of the preceding years. There are, in my mind, some pertinent thoughts which I wish to convey to you. None of them is of the quality which rocks the world, nor do I anticipate that anything I may say will descend upon you as an avalanche of erudition. Nevertheless I shall be about the business of my office and fulfill the obligation as best I can.

The past two years have been momentous ones in diverse ways. Our Society has grown to unprecedented proportions and accomplishments; also, it has been beset by unparalleled tragedy. There is no wish on my part to open the proceedings upon a sombre note, but I cannot deny that foremost in my heart is the realization that since we last met an appalling number of our members have been taken by death. These men were your friends and my friends. We miss them poignantly, and it is plain, from the exchanged greetings of this morning and yesterday, that each one of us was, and is, conscious of irretrievable loss. I shall not name the members whom we have lost and will comment only briefly and to this effect. As different as the seasons of the year were the lives and personalities of these men, yet one factor stands out in bold and comforting relief. Despite their differences, each one of them served his profession and his society honestly, sincerely, and to the best of his ability. For this we are proud and grateful. I sincerely wish that we, the Pacific Coast Society of Orthodontists, as an organization, could say as much for ourselves regarding our actions in their behalf. As individuals personally interested in our friends we have behaved commendably. However, it is my adamantine opinion that upon the

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death of a member our Society fails completely, pitifully, and shamefully in its responsibilities to his memory and to his close survivors. Later, I shall make specific recommendations concerning this subject.

The past two years, by virtue of my office, brought me, in addition to sorrow, compensatory happiness and gratification. That I did not enjoy more of these emotions prior to my presidency is my own fault. Many of you, also, are missing a rare opportunity to experience great pleasure by being, as I was heretofore, remiss in accepting or fulfilling obligations and privileges offered by the various elected offices existing within the Pacific Coast Society of Orthodontists. Sometimes the fulfillment of these duties entails the expenditure of some energy and the loss of a bit of profitable time. This is inconsequential in comparison with the potential rewards. I speak, now, specifically, of my first experience as delegate to the American Association of Orthodontists. Frankly, I approached this assignment unwillingly, after having sidestepped it on previous occasions. Now I would not exchange the experience for anything you might mention. The meeting of the Board of Directors of the American Association of Orthodontists was a revelation to me in many ways. Perhaps the most outstanding and ineradicable impression was the wisdom and unselfishness with which the members of this Board attacked problems of great importance to all of us as men and as orthodontists. All through the discussions the atmosphere was one of serious contemplation. As widely divergent as the various opinions were, and as vehement the discussion, never once was there any evidence of short tempers nor the least taint of any motivation other than that which would be the best for the parent organization, its constituents, and its individual members. We have heard much, and frequently, of the virtue attendant upon "remaining green wood." I do not presume to argue that green wood does not have its uses, but I say to you, if you would build a strong, resistant structure which is capable of standing against the cyclonic forces of destruction you must use sound, seasoned wood which, prior to having been placed under stress, has been through the period of warping and instability. The men who have borne the burden of maintaining our association and upon whose shoulders rest its future and the future of each one of us are just such sound, seasoned timber and possess in addition the wisdom required of them. At the risk of being annoyingly personal in my remarks I shall mention that being president of anything and associating with the high brass is a new experience to me. Naturally, I approached the conference room in Chicago, as I did the presidency of the Pacific Coast Society of Orthodontists, with all the assurance of a peasant boarding a tumbril for his ride to the guillotine. I had hoped to enter the council chambers unnoticed and to remain inconspicuous throughout the proceedings. Such was not to be my role. The Pacific Coast Society is the second largest constituent of the American Association of Orthodontists, and as president of our group I was more or less high lighted. To add to my initial discomfiture, I was seated opposite men against whom I frequently had battled, verbally and at great distance, with rapier, sabre, and broadaxe. Our differences had been in the field of treatment policies and procedures. Here I was, face to face

with my adversaries and engaged in discussions which readily could become venomous. To my everlasting pleasure, in matters pertaining to association policies, I found my erstwhile adversaries and myself, uninfluenced by our scientific differences, able to enjoy a meeting of minds across the council table and afterward, over a brimming glass of Lake Michigan water, to discuss our differences of opinion pleasantly, seriously, and in a mood of fraternalism. When the opportunity to associate with such men as these is offered you, seize it avidly and take enthusiastic advantage of it. Such is my advice to you; advice formulated upon my own belated realization of how many benefits of our association I have allowed to slip through my fingers.

For the past several years the Pacific Coast Society of Orthodontists has been operating under a constitution and bylaws which was inadequate. Several attempts to amend, correct, or modify this document were made by committees of capable and earnest men. Because of changes, additions, and deletions by the several committees who were reluctant to discard the original instrument, it became complex, unwieldy, and inconsistent. In addition, recent changes made in the constitution and bylaws of the American Association of Orthodontists necessitated additional changes in our own. I was convinced that further effort to adapt our original instrument to the requirements of the parent organization would result in additional confusion. With this in mind I appointed a Committee on Constitution and Bylaws with instructions to rewrite this document in its entirety, including in the new one all the modifications, additions, and deletions required to place us in harmony with the parent organization, with our own ideas, and with sufficient flexibility to accommodate itself to the ever-changing administrative needs. The new constitution and bylaws has been in the hands of the membership for several weeks and I hope it meets with the approval of everyone. To me it is a masterpiece of clear, concise, nonrepetitious thinking, stern in its requirements yet flexible enough to remain basically intact as long as any of us will have need for it; my compliments to Dr. Donald MacEwan and his committee for an outstanding accomplishment. I have one criticism to offer and it pertains to a minor provision, easily remedied should the membership see fit to do so. I firmly believe that a Necrology Committee of three is inadequate and I do not believe their duties should be specified too simply. It is humiliating to me to consider the apparent callousness with which we regard the death of men who have been active, useful, and beloved members of our Society. A brief eulogy in the Bulletin, a minuscule contribution to a charity in the name of the deceased, and—oblivion. It is not right that such a situation continue. I believe and recommend that a Necrology Committee be enlarged to include a member, not only in each component, but, in so far as is practical, in each locality. I also believe and recommend that at least one of these committeemen make himself available to the widow, executor, or other involved survivors immediately upon the death of a member and that he be prepared with the needed knowledge to make himself helpful. I have seen too much, in the past two years, of heartbreak, confusion, and bewilderment afflicting the relicts of our members. I have seen the entrance into the picture of uninformed or unsympathetic lawyers further complicating a tragic situation by

ill-considered advice or ignorance of the rules of orthodontic practice. All of this constitutes a most unsuitable reward for the years of service and affection which we have gained from the deceased. It is my further recommendation that the Necrology Committee be empowered and obligated to learn both the letter and spirit of the law pertaining to practices, debts, and other obligations inherited by the survivors of a deceased orthodontist. To obtain these facts seemed like a simple procedure; to my amazement and chagrin I have encountered, so far, unyielding obstacles. It was my hope to have prepared and printed a small booklet entitled *The Orthodontist and the Law* which would be available to every member of our society and an additional copy sent immediately to his widow or executor. It is just as simple as that, but trying to get a simple statement from a lawyer is a very difficult task. To aid me in this endeavor, I enlisted the assistance of an insurance company carrying malpractice protection. After several months of waiting, I still have nothing tangible to offer and must confess defeat. Please give this subject your earnest consideration and provide the authorization required to complete the project.

All of us are aware of the controversy with which we have been occupied during the past few years in regard to removal of dental substance as a therapeutic aid in orthodontic procedures. It is not my intent to dwell upon the need for such removals nor to chastise anyone who upholds either aspect of the argument. In my opinion, there are instances where the reduction of tooth substance is imperative. I am sure everyone conversant with orthodontic problems acknowledges that as an incontrovertible fact. Also, I believe that sober thought and increased knowledge have come from our sometimes violent discussions of this topic. However, much misunderstanding has been engendered by our disagreements and discussions. The public is confused, bewildered, and is beginning to show definite signs of exasperation with us. For the truth of this statement I have the authority of none other than Dr. Harvey Pollock, the Editor of our official publication, the AMERICAN JOURNAL OF ORTHODONTICS. No one will deny that Dr. Pollock holds a sensitive finger on the pulse of everything pertaining to us and to the public which supports us. It has been my good fortune to know Dr. Pollock quite well and to exchange letters with him at intervals sufficiently frequent to dispel any formality between us. In a recent communication from him, there was appended the following: "As editor of the JOURNAL I received a letter today in which a lady inquired, 'Where can I find an orthodontist who straightens teeth instead of pulling them?' If orthodontics is to survive and if it must remove teeth, for God's sake quit talking about it. Conceal it like the cause of pregnancy. Both are essential in order to produce the desired results but neither should be done or discussed in public. This constant arguing about the removal of teeth confuses the subject and undermines public confidence." No one can quarrel with Dr. Pollock over those statements but I think a little interpretation might be helpful. I do not believe he means we should stop arguing the indications and contraindications for the reduction of dental substance. That would be an unhealthy condition. I do think he means that we should refrain from bringing our patients or prospective patients

into the argument, and above all that we should desist from publicly criticizing any orthodontist who does or does not reduce the number of dental units. In this regard the so-called extractionists and nonextractionists are equally to blame. (Those are loathsome terms which I wish could be interred permanently.) There is a way, I believe, by means of which all this pro and con discussion before the public can be eliminated. Whether to reduce the number of dental units is not a question of playing the percentages but of accumulating all possible diagnostic evidence and then presenting it dispassionately and impersonally. If we, ourselves, are convinced and the presentation is logical, those responsible for the child, or the adult himself, will acknowledge the needs as explained to them. This explanation by affirmation will obviate the need for negation or derogation of other opinions. To my mind that is all that is necessary. Let us keep our extramural explanations upon an educational, scientifically acceptable basis and confine our arguments and discussions to the privacy of our professional groups.

TAFT BLDG.

THE CHARGE TO THE NEW MEMBERS

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IT IS my privilege as an older member to address myself to you who are meeting with us for the first time. It is customary on these occasions to call your attention to certain factors which will benefit you and your organization and keep it the happy family which has characterized its existence thus far.

Have you ever had this happen to you? Just before lunch an automobile salesman that you probably knew called you and asked if he could take you to lunch; before you had time to think you had accepted his offer. When you arrived at the curb there was a brand new Buick, spotlessly clean. The salesman moved over and said: "Doctor, you drive please." As you were driving along you happened to mention that you liked Chryslers. Did the salesman object to you liking Chryslers? No, he complimented the Chrysler car but then added, "I think Doctor you will find that this car has many advantages over a Chrysler and I would like to show them to you." He knows that a disparaging remark breeds loss of confidence.

In orthodontics it is easy to say the other fellow is wrong.
It is easy to say he used the wrong appliance.
It is easy to say he should have extracted or should not have extracted.
It is easy to say he started the case too soon or too late.
It is easy to say he is a lousy orthodontist.

But every time it is said the science of orthodontics is hurt and every single soul connected with that science is harmed, including the one making the statement, and that person, if he only realized it, is by far the most injured. If he would only stop and think before it is too late.

The one listening could very easily be a salesman, who knows all about such trick statements, or he may well be a man occupying a position where it is his everyday duty to analyze people who make such statements. Remember, that in a business way the listener is probably your superior and statements of this kind are poor business.

A No. 7 shoe does not fit every foot any more than one appliance fits every case.

A Chevrolet may be the choice of some people over a Cadillac and that choice may not be the result of financial expediency; it may be for simplicity.

The longer one lives the more one lives up to a certain ideal. Usually the longer one lives the more considerate, the more reserved one becomes. Time softens—time gives experience—time gives tolerance.

Oh how I wish I could go back over the ground I once trod, the decisions I once made, the statements I once gave expression to. Oh how I wish I could re-

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state those statements about others, could remake those decisions, could recover that ground, rethink those thoughts about others, relook the other fellow in the eye and know I had not done him an injustice in thoughts or in actions and helped my fellow orthodontist to live a better life in orthodontics, harmed no one and helped everyone in my profession.

Oh that I could retrace my steps and be able to say truthfully that by my statements, that by my teachings, that by my actions, that by my thinking, that by my own orthodontics, I am the proud possessor of a totally clear conscience, not only to my fellow orthodontists, not only to his patients, to my patients, to the patients' parents, to my community, to the specialty of orthodontics, to all these and more, that a totally clear conscience could be mine. When my turn comes to do the thing that we all, every one of us, only do once, and that comes all too soon, life is so short, so dreadfully, dreadfully short, there is hardly time to correct one's mistakes.

I would that when that time comes I could look back with not a single mistake, not a single memory, to mar that life that was mine, yes, mine and mine alone, to live, to act, to say, to think. Yes, I could look back and would know that I had no regrets, that I had been a model for everyone to try to equal, to follow.

My money, my earthly things, will be left behind, to fight over. Yes, my money, my earthly things will all be left behind. My expressed thoughts, my actions, my statements, my teachings, yes, all will be left behind with my earthly possessions, but my memories, they are mine, mine and mine alone. They belong to me, they will be gone forever and ever with me.

I hope that everyone of you will take memories with you worth the price you will have paid, that they are worth taking in exchange for the material things you will leave behind.

And I hope today that I will have helped to make those memories a little more worth taking, those memories that if good should wrap you in the softest of silk wrappings (so to speak) for that long, long voyage ahead. And I do hope a smile of complete satisfaction will be on your lips as you start on that long, long trip, just you and your memories.

CRANIOMETRY AND CEPHALOMETRY AS RESEARCH TOOLS IN GROWTH OF HEAD AND FACE

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IT IS worthy of note that modern techniques in roentgenographic cephalometry owe their inception to studies of racial cranial types. For over one hundred fifty years physical anthropologists have been preoccupied with race and sex differences in the adult skull. In an effort to solve these two problems innumerable measurements have been taken and indices calculated. In addition countless observations and classificatory systems have been set up. In other words, skulls have been measured and described to within an inch of their lives, so to speak.

It was readily enough discerned that measurement and description were not sufficient. A skull of given size and proportions, of given morphologic construction, might be described, but not easily visualized. Furthermore, if a large number of skulls were studied an average or *type* must emerge to be representative of the whole. Consequently, it is not amiss to say that the concept of *skull-type* (as representative of a given race or of an adult male or an adult female) has been in anthropologic thinking for a long, long time. Ideas of *growth-types* came much later, but merely took over the earlier thinking, applying newer techniques.

The problem of visual comparability can really be solved in only one way, viz., to make type-drawings and then to compare them directly by either placing them side by side, or by superimposing one type-drawing upon another. This, in principle, and even in detail, is what has been done by craniometricians and cephalometricians alike. There has been a difference in manner or in *plane of superimposition,* but that is all.

It is the purpose of the present article to present a historical survey, as it were, of the many planes which have been devised or adapted to elucidate type-similarities and type-differences in direct comparison. It has not been too difficult to classify the various methods logically into four main groups, somewhat as follows:

I. *Resting Horizontal Planes.*—In this group there are two planes, each based in principle upon the assumption that two crania to be compared may be viewed or drawn from norma lateralis sinistra when they are placed upon a table (or any horizontal surface) (Fig. 1).

1. *Blumenbach's Plane* is the simplest. The skull, without the mandible, is placed on the horizontal surface and the points of contact are noted: the maxillary teeth anteriorly and either the occipital condyles (in younger skulls)

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or the mastoid processes (almost always in adult skulls). When the contact points are ascertained a line tangent to both is drawn, and the resultant plane is the basis of orientation in comparison.

2. *Von Baer's Plane* is similar to the foregoing, and takes cognizance that teeth are often missing (either ante- or post-mortem) or that cranial base is often damaged. This plane is roughly parallel to Blumenbach's. It is drawn in largely by inspection: the plane follows the general anteroposterior axis of the zygomatic arch, but is drawn as a tangent to the uppermost convexity of the arch, usually just back of the articular eminence and disregarding the final upward sweep of the base of the zygomatic process of the temporal bone.

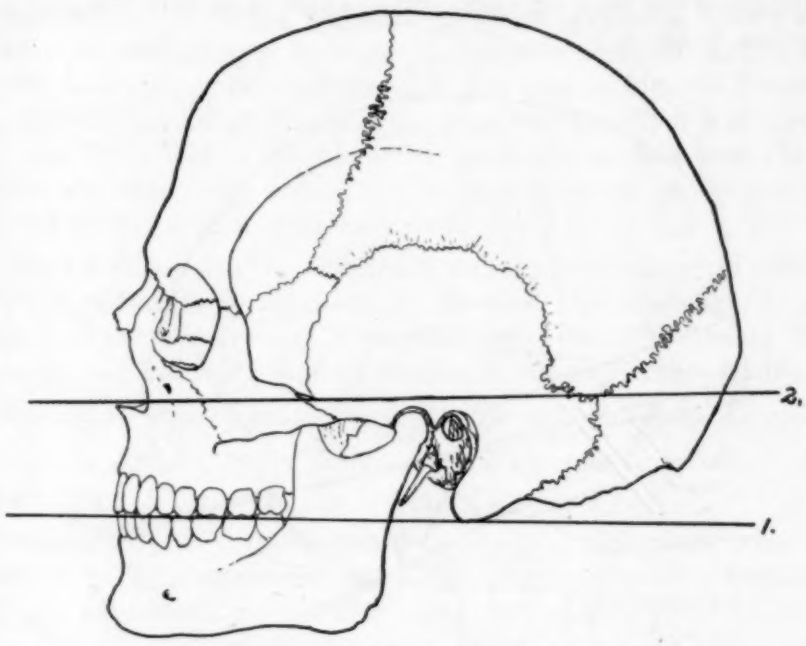

Fig. 1.—"Resting" planes (horizontal). *1*, Blumenbach's Plane; *2*, Von Baer's Plane.

These two planes employ no really definitive landmarks. Therefore, they are inherently variable, since precision of definition is defeated from the very start. Yet, they served for a long time to provide at least a degree of comparability in type-contrast. It is to be noted, further, that as a rule only two (adult) skulls were compared. There was little or no concept of type-average, and absolutely none of seriation, i.e., comparison over a period of time.

II. *Planes Using Various Craniometric Points.*—There are no less than eight of these planes (Fig. 2). They seek to correct the deficiency of Group I, viz., the lack of precise definition of end-points. In addition there is another aim, in that an attempt is made to provide planes that might make comparable the contour tracings of fragmentary crania. It is quite probable that the finding of the *Pithecanthropus calvarium* in 1891-1892 was the great impetus to most of this group of planes.

1. *Broca's Plane* extends from the alveolar point (the tip of the interalveolar septum between upper I1-I1) to the lowermost point of the occipital condyle* when the skull is resting on a horizontal surface. Obviously, the line from the alveolar point tangent to the occipital condyles is but an attempt to improve upon Blumenbach's plane. The principle is retained, but the anterior end of the plane is more precisely defined.

2. *His' Plane* extends from acanthion (the tip of the anterior nasal spine) to opisthion (the hindmost point on the posterior margin of the foramen magnum, in the midsagittal plane). This is an improvement over the Broca plane, in so far as it provides for tooth loss and resultant alveolar resorption; it also defines the posterior end-point much more precisely. Its weakness resides in the variability of the anterior nasal spine, which is of very unequal size and is often broken in skulls.

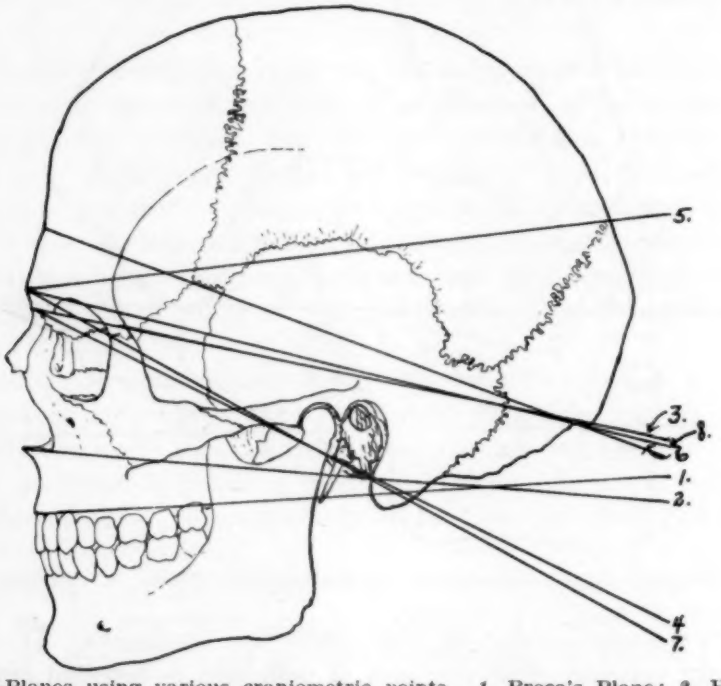

Fig. 2.—Planes using various craniometric points. *1*, Broca's Plane; *2*, His' Plane; *3*, Martin's Plane; *4*, Huxley's Plane; *5*, Hamy's Plane; *6*, Schwalbe's Plane; *7*, The Anonymous Plane; *8*, Schmidt's Plane.

3. *Martin's Plane* for the first time recognizes the transition from facial to cranial skeleton; and, indeed, it establishes an anterior end-point which is basic to all cephalometric planes. It extends from nasion (intersection, in the midsagittal plane, of the internasal and the nasofrontal sutures) to inion (most elevated point on the external occipital protuberance, in the midsagittal plane). The selection by Martin of nasion was a far-seeing functional differentiation; here, in truth, is a point that must be a landmark whenever skull and facial skeletons are to be contrasted, whether in mere typing or whether in growth

*In Fig. 2 the location of the occipital condyles and of the foramen magnum is only approximated.

analysis. The choice of inion is obviously a concession to vault comparison, rather than complete skull. Inion is too variable in size to be of much use; furthermore, it is age-linked (increases in size after puberty), and it has sex differences (larger in males than in females).

4. *Huxley's Plane,* often called "Huxley's basicranial axis," represents an almost intuitive genius. It employs as its anterior end-point the nasion above defined; the posterior end-point is basion (most forward point on the anterior margin of the foramen magnum, in the midsagittal plane). In almost every sense this plane anticipates the present-day cephalometric planes (see below). It has an anterior point, nasion, which demarcates skull and face morphologically; it has a posterior point, basion, which, in a sense, demarcates skull and face biogenetically, i.e., in the unfolding of growth-gradients. Were it not for the virtual impossibility of locating basion roentgenographically, Huxley's plane could scarcely be improved upon. It was used by him and his generation only in superimposition of drawings for type-comparison; it was also used to separate skull from face in the calculation of relative surface areas; in this last sense there was some rough comparison of age-changes in surface area of facial skeleton and surface area of cranial skeleton.

5. *Hamy's Plane,* like the next three, was merely designed to compare contour drawings of calvarial remains. It extended from glabella (the most anterior point on the frontal bone, in the midsagittal plane) to lambda (the intersection of the sagittal and lambdoid sutures, in the midsagittal plane).

6. *Schwalbe's Plane* extends from glabella to inion (both defined above).

7. *The Anonymous Plane** extends from glabella to opisthion (both defined above).

8. *Schmidt's Plane* extends from ophryon (the midsagittal intersection on the frontal bone of a transverse line connecting the closest approximation of the right and left lineae temporales) to inion (defined above).

In Group II, Planes 1-4 may be generally considered as craniometric preludes to cephalometry; Planes 1-2 link Group I and Group II; Planes 3-4 are certainly a tremendous morphologic and functional advance, and will link Group II with Groups III and IV (see below). Planes 5-8 of Group II never have emerged from purely craniometric techniques; they are, as a group, designed almost exclusively for calvarial analysis and comparison.

III. *Planes Centering Upon the External Auditory Meatus.*—With this group we come to planes for the first time directed at serial growth superimposition and analysis. We come also to a major advance in technique and concept, viz., the choice of a central transverse axis (transmeatal or biporionic) as the focal point, or area, of radially directed growth. The technique is still basically craniometric, but the adaptation to cephalometry is merely instrumental (from craniometer to roentgenographic cephalometer). There is no real difference in concept or philosophy of approach. (Fig. 3.)

*If any reader can identify the author of this plane please communicate with the writer.

1. *Camper's Plane* is from acanthion (defined above) to the center of the bony external auditory meatus (the "center," as in the other two next planes, being determined only by visual inspection). It is not sure if Camper ever used this as a plane of superimposition; it was basically one side of a facial angle called "Camper's Facial Angle"; and yet, it has its place in craniometric history as a means of craniofacial type analysis.

2. *Von Ihring's Plane* clearly foreshadows the famed and basic Frankfort horizontal (see below) which is the very foundation of roentgenographic cephalometric orientation. It extends from orbitale (the lowest point on the inferior margin of the left orbit) to the center of the bony external auditory meatus.

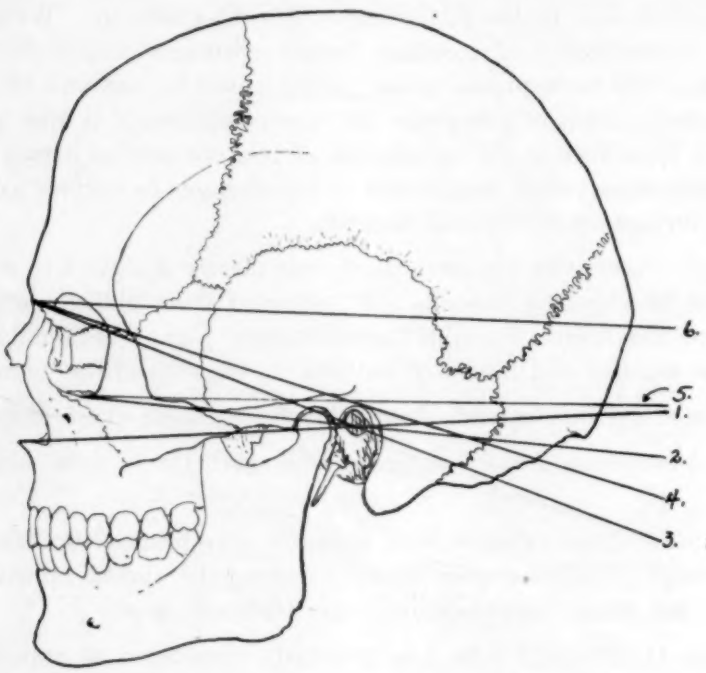

Fig. 3.—Planes centering upon external auditory meatus. *1*, Camper's Plane; *2*, Von Ihring's Plane; *3*, Pycraft's Plane; *4*, Montagu's Plane; *5*, The Frankfort Horizontal; *6*, The "Nasion Parallel" Plane, of Krogman and Todd.

3. *Pycraft's Plane* returns to the morphologic junction between skull and face, since it extends from nasion (defined above) to the center of the bony external auditory meatus. Actually, the plane probably owes its inspiration to Huxley's basicranial axis, since its posterior end-point (center of the bony e.a.m.) is in fairly definite relationship to the basion used by Huxley as his posterior end-point.

4. *Montagu's Plane* avoids the uncertainty of the "center" of the bony external auditory meatus, and it provides for a more precise definition (usually via instrumentation) of the posterior end-point. It extends from nasion (above defined) to porion (the most lateral point on the roof of the bony external auditory meatus). In practice porion is instrumentally determined, since it is the

contact point of the lateral, superior, part of the bony e.a.m. with the ear-rods of the craniometer. When porion is taken over into cephalometry the ear-rods of the cephalometer define—or locate—porion in the same manner, though on the cartilaginous e.a.m. In either event—craniometer (skull) or cephalometer (head)—the establishment of a transmeatal or biporionic axis is basic to any attempt at superimposition.

5. *The Frankfort Horizontal* (or FH) is based on placing the *right and left poria* and the *left orbitale* (both points defined above) in the same horizontal plane. It makes no difference whether a craniometer or a cephalometer is used: the orientation of the (skull) (head) is directly comparable. The FH is not so much, however, a plane of superimposition as a plane of orientation. It is used as a constant plane of reference by the physical anthropologist when he is measuring and describing skulls. It is the unvarying position in which the head is placed when lateral and posteroanterior x-rays are taken. It is, therefore, a starting point in all cephalometric analysis.

6. *The Krogman "Nasion-Parallel"* is based upon two observations already noted: (1) the nasion as the morphologic site of craniofacial dichotomy; (2) the FH as a common and universal plane of orientation. It must be added, further, that the selection of such a "parallel" takes cognizance of the early and relative stability of nasion and of the orbital complex during growth, due to the rapid ("neural pattern") growth of orbital height. Here is how this plane is constructed: on the first, and youngest, lateral outline (of either a craniometric drawing or a roentgenographic cephalometric tracing) a line is drawn through nasion parallel to the FH, which has also been drawn in. Serial superimposition, during growth, is done in two ways: (1) Krogman superimposes porion upon porion (in the FH), and places each successive nasion upon the parallel; (2) Todd superimposes nasion upon nasion, in the parallel, and permits each successive porion to fall where it will.

This parallel serves to elucidate a principle which we hold to be fundamental in growth analysis: *there are no absolutely fixed points in the growing head and face: there are only relatively stable points.* When the porion, in this parallel, is superimposed the nasion moves forward with growth, on the plane so established; when the nasion is superimposed, in the plane so established, the porion moves downward and back. Obviously, as a result, one might deduce that in the first instance facial structure moves forward, while in the second instance cranial base does exactly the opposite.

The search for the "lodestone" of comparability must inevitably lead to the x-ray, the only way in which the *same head* can be followed in growth; the only way in which comparability can be sought in terms of a technique repeated and tested on a *serial basis.*

It is important to note that nasion is a least common denominator, so to speak: it is the anterior end-point of all roentgenographic cephalometric planes, having been taken over without change from craniometry.

IV. *Roentgenographic Cephalometric Planes* (Fig. 4).—

1. *The Broadbent Plane* extends from nasion (picked up on the lateral x-ray as the most anterior point on the nasofrontal suture) to sella (midpoint of the sella turcica, located by visual inspection only). This plane has a validity in that it is in morphologic substance the floor of the anterior cranial fossa; as such it is directly related to neuro-orbital growth which is very rapid in infancy and early childhood; early cessation of growth-changes thus grants this dimension considerable relative stability.

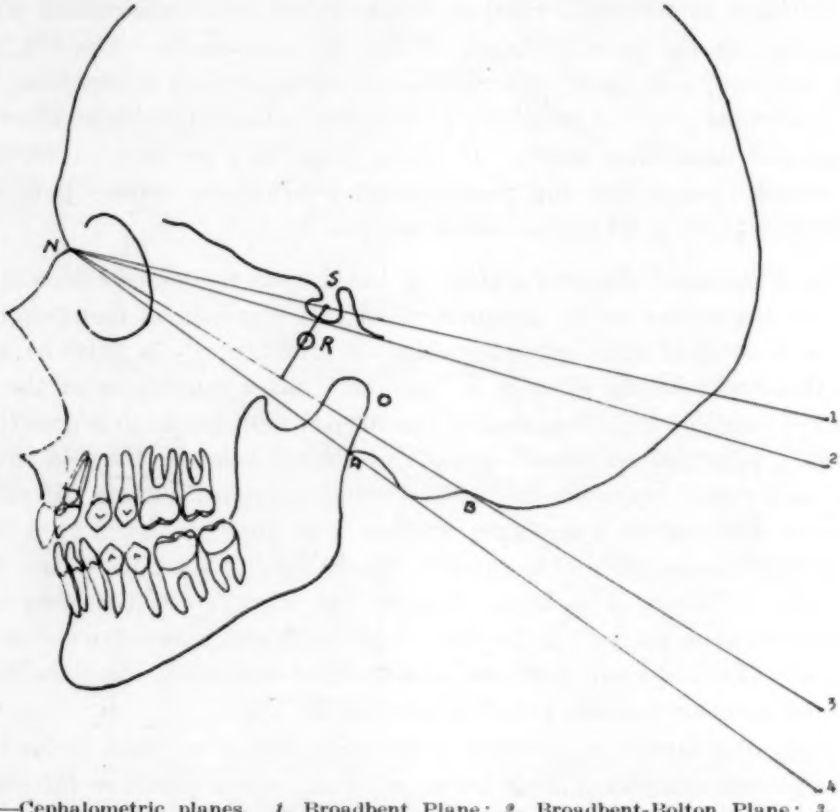

Fig. 4.—Cephalometric planes. *1*, Broadbent Plane; *2*, Broadbent-Bolton Plane; *3*, Margolis Plane; *4*, Björk Plane.

The Broadbent or nasion-sella plane is not to be considered an axis of cephalofacial transition. It is far more an early stabilized dimension of upper facial depth, so that further facial growth must, by definition, grow forward and downward. This plane, in essence, is the roentgenographic counterpart of the craniometric "nasion-parallel," obviating, however, the apparent instability of the porion. There can be no doubt that nasion, in superimposition, is a key-point: morphologically it is the focal point (or, better, locus) of cephalofacial junction.

2. *The Broadbent-Bolton Plane* extends from nasion to the "Bolton Point" (which is, on the lateral headplate, the uppermost point in the postcondylar fossa, usually just retromastoid in position as the lateral headplate is viewed).

This is merely a plane of orientation. Actual superimposition is as follows: on each lateral plate the Broadbent-Bolton Plane is drawn in as above; then the midpoint (S) of the sella turcica is located by inspection; then there is drawn to the point S a line vertical to the B-B plane; this vertical is then divided into equal halves and the midpoint is called "R," or "Registration Point." In all serial superimpositions "R" is superimposed upon "R," and the x-ray tracings are so rotated around "R" that the B-B planes are parallel to one another.

In principle this plane avails itself of a number of previously ascertained morphologic and growth criteria: (1) the use of nasion as a demarcation between head and face; (2) the early and relative stability of the nasion-sella (or anterior cranial base) dimension; (3) the early and relative stabilization of vault contour and (to a less extent) posterior cranial base. In some heads mastoid shadow obscures the Bolton Point area, but approximation can be made.

It is worthy of repetition at this point that Huxley's "basicranial axis" and the Broadbent-Bolton's nasion-sella-Bolton complex are amazingly alike in their general orientation.

3. *The Margolis Plane* extends from nasion to the top of the spheno-occipital synchondrosis. This plane is used in conjunction with the *mandibular plane* (a line tangent to the anterior and posterior contact points—allowing for the antegonial concavity—of the mandibular base). The mandibular plane is also used in conjunction with the Frankfort Horizontal.

This plane presents much the same problem as does Huxley's basicranial axis, viz., the technical problem of the precise location of the posterior end-point on the x-ray. In addition, there is an added factor, i.e., the synostosis of the spheno-occipital suture in the late second, or the early third, decade.

4. *The Björk Plane* extends from nasion to articulare (defined as the point on the lateral x-ray where the posterior border of the ascending ramus intersects the contour of the temporal bone; where there is duplication of borders, i.e., right and left sides, the mid-distance, a, is determined between the right and left two points a_1 and a_2). Björk uses this plane not so much as an orientational axis as a relatively stable and accurate dimension.

DISCUSSION

This historical footnote has had as its main purpose the demonstration that type comparison, whether to elucidate race differences or to assess growth progress, is a time-honored technique. Moreover, many different planes of comparison, orientation, and/or superimposition have been devised, each assuming that it is the best for a given purpose, be that purpose the craniometry of static resemblance or the cephalometry of dynamic difference (growth-change).

This is not the place to evaluate or to discriminate; certainly it is not our aim to go beyond a research situation. Yet the researcher must, on the evidence of the historical evolution from cranio- to cephalometric techniques, point out

that overrefinement of techniques, in the sense of defining *absolute* planes (or the end-points thereof), is not permissible in the surging changes inherent in biological unfolding.

The physical anthropologist, in using his craniometric measurements, descriptions, planes, and so on, learned that no single dimension, no single index, no single morphologic trait, could stand for the whole. The *type* is a complex whole, the sum of all parts. Similarly it is urged upon the cephalometrician that no one dimension, no one angle, no difference of a few millimeters or of a few degrees in an angle, can assume a type-difference that is of *absolute diagnostic value.*

Roentgenographic cephalometry is the natural heritor of craniometry, and it has gone far ahead, as it should. It is three-dimensional; it penetrates into the very depths of growth, as it were; and it truly is time-linked in the sense that it is an auto-repetitive technique. *As a research tool in the growth of head and face it has no peer.* But—and here we are the cautious investigator rather than the hopeful practitioner—we urge that its interpretation have the conservatism consistent with the inherent limitations of growth-movement. Conclusions must be relative to the growth-stage of each individual child; there are, as far as we know, no two points in head and/or face which, during growth, stand in unvarying relation to one another. Two or more points are related to one another only in so far as they are part of the "growth pattern" of a given child; and if the two or more points determine one or more dimensions, or subtend one or more angles, or are used in one or more ratios, the problem is still the same: dimension, angle, and ratio are each interpretable only in relation to one another in the individual complex. *The essence, therefore, of the roentgenographic cephalometric method is its ability to capture moments of growth and then, on a serial basis, to link them meaningfully in terms of individual growth progress.* When this is done, when growth (no matter what part of the organism) is understood as merely relative, and *never* absolute, then appraisal will be cautious and conclusions will be conservative.

Then, and then only, will the slower progress of the researcher catch up with the too-often impatient diagnostics of the practitioner, who, in last analysis, translates theory into practice.

We would urge two principles that we have found to be useful guides in research and its application: "Knowledge is slow of foot, and wisdom limps far behind." "Perfection may be the goal, but adequacy is the most useful standard."

SUMMARY OF GRADUATE, POSTGRADUATE, AND REFRESHER COURSES OFFERED BY THE ACCREDITED DENTAL SCHOOLS OF THE UNITED STATES AND BY THE ARMY AND NAVY DEPARTMENTS, 1950-1951

COUNCIL ON DENTAL EDUCATION OF THE AMERICAN DENTAL ASSOCIATION

HENRY M. WILLITS, D.D.S. (CHAIRMAN), DUBUQUE, IOWA,* EUGENE R. WESTCOTT, D.D.S. (VICE-CHAIRMAN), ATLANTIC CITY, N. J.,** ROBERT W. MCNULTY, D.D.S., LOS ANGELES, CALIF.,*** J. ROY BLAYNEY, D.D.S., CHICAGO, ILL.,** OTTO W. BRANDHORST, D.D.S., ST. LOUIS, MO.,*** PHILIP E. BLACKERBY, JR., D.D.S., BATTLE CREEK, MICH.,** WILLIAM H. HODGKIN, D.D.S., WARRENTON, VA.,* WILBERT JACKSON, D.D.S., CLINTON, N. C.,* J. BEN ROBINSON, D.D.S., BALTIMORE, MD.,*** GERARD J. CASEY, D.D.S. (ASSISTANT SECRETARY), CHICAGO, ILL., SHAILER PETERSON, PH.D. (SECRETARY), CHICAGO, ILL.

The Council on Dental Education of the American Dental Association, through its Secretary, Dr. Shailer Peterson, recently released a tabulation of the graduate, postgraduate, and refresher courses offered by the dental schools and by the Army and Navy through their educational programs. This list includes new courses that are now available.

It is of interest to note that the number of advanced courses has increased 35 per cent from 1949 to 1950 and from 1950 to 1951, and the number of students enrolled in these courses has increased 22 per cent.

The following report is published inasmuch as it is believed it is of great interest to the readers of the JOURNAL. The Council on Dental Education recently approved the American Board of Orthodontics.

The report follows.—*Ed.*

PREFACE

Many requests are received by the Council on Dental Education for information relative to the graduate, postgraduate, and refresher courses that are offered in the various schools and by the Army and Navy in their educational programs. The Council began collecting information on these courses some time ago, and last year prepared a comprehensive report. This report has been circulated widely as a result of the many requests that have been received.

This report of 1950-1951 is a summary of the graduate, postgraduate, and refresher courses offered by the dental schools and by the Army and Navy in their educational programs. It also includes a list of the new or potential advanced courses that are being offered. The report prepared in 1949-1950 included not only a summary of the advanced courses, but also information on the length of the courses and the degrees and certificates granted. Copies of this 65-page report are still available.

*Representative of the American Association of Dental Examiners.
**Representative of the American Dental Association.
***Representative of the American Association of Dental Schools.

NAMES AND ADDRESSES OF SCHOOLS TO WHICH INQUIRIES REGARDING THEIR ADVANCED PROGRAMS SHOULD BE SENT

School	*Dean*	NUMBER OF GRADUATE AND POSTGRADUATE STUDENTS* *Graduate*	*Post-Graduate*
California			
School of Dentistry College of Physicians and Surgeons 344 Fourteenth St. San Francisco 3, Calif.	Dr. Ernest G. Sloman	0	0
College of Dentistry University of California The Medical Center San Francisco 22, Calif.	Dr. Willard C. Fleming	1	8
College of Dentistry University of Southern California 122 East Sixteenth St. Los Angeles 15, Calif.	Dr. Robert W. McNulty	10	0
District of Columbia			
School of Dentistry Georgetown University 3900 Reservoir Road, N. W. Washington 7, D. C.	Dr. Clemens V. Rault	4	0
College of Dentistry Howard University 5th and W Streets, N. W. Washington 1, D. C.	Dr. Russell A. Dixon	0	1
Georgia			
School of Dentistry Atlanta-Southern Dental College Emory University 106 Forrest Ave., N. E. Atlanta 3, Ga.	Dr. John E. Buhler	2	0
Illinois			
Chicago College of Dental Surgery Loyola University 1757 West Harrison St. Chicago 12, Ill.	Dr. A. Raymond Baralt	0	0
The Dental School Northwestern University 311 East Chicago Ave. Chicago 11, Ill.	Dr. Charles W. Freeman	27	0
College of Dentistry University of Illinois 808 South Wood St. Chicago 12, Ill.	Dr. Allan G. Brodie	12	192
Indiana			
School of Dentistry Indiana University 1121 West Michigan St. Indianapolis 2, Ind.	Dr. Baynard K. Hine	9	0
Iowa			
College of Dentistry The State University of Iowa Iowa City, Iowa	Dr. Alvin W. Bryan	7	6
Kentucky			
School of Dentistry University of Louisville 129 East Broadway Louisville 2, Ky.	Dr. Raymond E. Myers	0	2

*As reported on Oct. 15, 1950.

School	Dean	NUMBER OF GRADUATE AND POSTGRADUATE STUDENTS* Graduate	Post-Graduate
Louisiana			
School of Dentistry Loyola University 6363 St. Charles Ave. New Orleans, La.	Dr. Frank J. Houghton	0	0
Maryland			
Baltimore College of Dental Surgery Dental School University of Maryland 42 South Greene St. Baltimore 1, Md.	Dr. J. Ben Robinson	1	0
Massachusetts			
Harvard School of Dental Medicine 25 Shattuck St. Boston 15, Mass.	Dr. James M. Dunning	0	0
Tufts College Dental School 136 Harrison Ave. Boston 11, Mass.	Dr. Cyril D. Marshall-Day	78	12
Michigan			
School of Dentistry University of Detroit 630 East Jefferson Ave. Detroit 26, Mich.	Dr. Rene Rochon	1	1
School of Dentistry University of Michigan Ann Arbor, Mich.	Dr. Paul H. Jesserich	36	0
Minnesota			
School of Dentistry University of Minnesota Washington Avenue and Union St., S. E. Minneapolis 14, Minn.	Dr. William H. Crawford	20	210
Missouri			
Kansas City-Western Dental College School of Dentistry The University of Kansas City Kansas City 6, Mo.	Dr. Roy J. Rinehart	7	0
School of Dentistry St. Louis University 3556 Caroline St. St. Louis 10, Mo.	Dr. L. R. Main	9	0
School of Dentistry Washington University 4559 Scott Ave. St. Louis 10, Mo.	Dr. Otto W. Brandhorst	3	0
Nebraska			
School of Dentistry The Creighton University 26th and California Streets Omaha 2, Neb.	Dr. James H. Pence	0	0
College of Dentistry University of Nebraska Lincoln 8, Neb.	Dr. Bert L. Hooper	3	0

*As reported on Oct. 15, 1950.

School	Dean	NUMBER OF GRADUATE AND POSTGRADUATE STUDENTS* Graduate	Post-Graduate
New York			
School of Dental and Oral Surgery Columbia University 630 West 168th St. New York 32, N. Y.	Dr. Maurice J. Hickey Associate Dean of the Faculty of Medicine	0	31
College of Dentistry New York University 209 East 23rd St. New York 10, N. Y.	Dr. Walter H. Wright	0	374
School of Dentistry University of Buffalo 25 Goodrich St. Buffalo, N. Y.	Dr. Leon J. Gauchat	0	4
Ohio			
College of Dentistry The Ohio State University Columbus 10, Ohio	Dr. Wendell D. Postle	6	98
School of Dentistry Western Reserve University Cleveland 6, Ohio	Dr. William L. Wylie	2	0
Oregon			
Dental School University of Oregon Portland 14, Ore.	Dr. Harold J. Noyes	0	0
Pennsylvania			
School of Dentistry Temple University 3223 North Broad St. Philadelphia 40, Pa.	Dr. Gerald D. Timmons	0	85
Thomas W. Evans Museum and Dental Institute School of Dentistry University of Pennsylvania 4001 Spruce St. Philadelphia 4, Pa.	Dr. J. L. T. Appleton	20	306
School of Dentistry University of Pittsburgh Thackeray and O'Hara Streets Pittsburgh 13, Pa.	Dr. Lawrence E. Van Kirk	12	40
Tennessee			
School of Dentistry Meharry Medical College Nashville 8, Tenn.	Dr. William H. Allen	0	0
College of Dentistry University of Tennessee Memphis 3, Tenn.	Dr. James T. Ginn	0	15
Texas			
College of Dentistry Baylor University Dallas 1, Texas	Dr. George L. Powers	62	0
School of Dentistry University of Texas Houston 4, Texas	Dr. Frederick C. Elliott	0	0

*As reported on Oct. 15, 1950.

School	Dean	NUMBER OF GRADUATE AND POSTGRADUATE STUDENTS* Graduate	Post-Graduate
Virginia			
School of Dentistry Medical College of Virginia Richmond 19, Va.	Dr. Harry Lyons	0	0
Washington			
School of Dentistry University of Washington Seattle 5, Wash.	Dr. Ernest M. Jones	17	2
Wisconsin			
School of Dentistry Marquette University 604 North Sixteenth St. Milwaukee, 3, Wis.	Dr. O. M. Dresen	0	0
Alabama			
School of Dentistry University of Alabama University Medical Center Birmingham 5, Ala. (First freshman class admitted in Fall, 1948)	Dr. Joseph F. Volker	0	0
North Carolina			
School of Dentistry University of North Carolina Chapel Hill, N. C. (First freshman class admitted in Fall, 1950)	Dr. John C. Brauer	0	0
	Total	349	1,381

CODE AND DEFINITION OF TERMS USED IN CHART

Code	Definition
G	*Graduate Courses.*—Advanced courses for those especially prepared and qualified to do work beyond the undergraduate level. The work done at this level leads to a degree upon completion of the requirements specified by the graduate school.
PG	*Postgraduate Courses.*—Special courses pursued by students who have graduated in dentistry. These courses do not lead to a degree but certificates are often granted.
R	*Refresher Courses.*—Short courses for the purpose of reviewing clinical procedures and of reviewing those performance skills usually developed by the student in the undergraduate curriculum.
NC	*New Courses.*—Those advanced courses which the school believes that it could arrange to offer at the graduate, postgraduate, or refresher level if a special demand were made either by a qualified group of students, or in some instances when requested by a single, qualified individual.
Arabic Numerals	The number of graduate, postgraduate, refresher or new courses is indicated by the number before the code letter.

*As reported on Oct. 15, 1950.

	ANESTHESIA	CANCER OF THE ORAL CAVITY	DENTAL ANATOMY	DENTAL MATERIALS	DENTAL PROSTHESIS	DENTAL SURGERY	DENTISTRY FOR CHILDREN	DIET OR NUTRITION	GENERAL DENTISTRY	HISTOLOGY	OPERATIVE DENTISTRY	ORAL DIAGNOSIS	ORTHODONTICS	PATHOLOGY	PERIODONTIA
Alabama	No program														
Phy. & S.	3-NC				1-NC 1-PG	1-NC	1-PG 2-R		1-PG						1-NC
California	*	1-R 3-NC	3-NC	6-NC	8-PG 7-NC	5-G 2-R 5-NC	2-R 4-NC					2-NC	2-PG 3-NC	2-G 2-NC	1-PG 1-NC
So. Calif.	3-R	1-R	1-R**	1-R	4-R	1-R	2-R				2-R	1-R	1-G 1-R		3-R
Georgetown		1-PG 1-R 2-NC	1-G	1-G	2-PG 5-R 2-NC	5-PG 5-NC		1-PG 1-NC	1-R		2-R			1-PG 1-NC	
Howard	3-R 3-NC		2-NC		3-PG 7-R 7-NC	4-PG 4-R 4-NC	1-R 3-NC	•		2-NC	2-PG 2-R 2-NC	2-NC	1-PG 2-R 5-NC	1-NC	1-R 1-NC
Emory	1-NC	3-NC	3-NC	3-NC	4-NC	5-NC	3-NC	1-NC		1-NC	2-NC	2-NC	1-PG	2-NC	
Loyola-Chi.	No program														
North-western		1-NC		1-NC	1-G 2-PG	1-G 1-PG	1-G				1-NC	1-NC	1-PG 1-G		1-G 1-PG
Illinois	2-PG 1-NC	2-PG	1-PG 1-NC	4-NC	3-PG 3-R 2-NC	1-C 1-R	1-G 4-PG 1-R	1-PG	1-R	1-PG 1-G 1-NC	2-PG 2-R	2-R	1-G 1-PG	1-PG	1-PG 1-R
Indiana			1-NC	4-NC	1-PG 1-R 1-NC	2-NC	1-R 2-NC		1-PG 1-R 1-NC	2-NC	1-PG 1-R 2-NC		2-G 1-NC	1-G 2-NC	1-NC
Iowa					5-G 5-PG	3-G 3-PG	4-G 4-PG				1-R	1-G 1-PG	7-G 7-PG	4-G 4-PG	3-G 3-PG
Louisville	3-NC	3-NC		3-NC	4-NC	5-NC	2-NC		2-NC		2-NC	2-NC			
Loyola-N. O.					1-NC	1-NC	1-NC				1-NC				
Baltimore			1-PG 1-R 1-NC		2-R 2-NC	4-PG 4-NC				1-G 1-NC	1-R 1-NC			1-PG 1-R 1-NC	
Harvard			1-NC			1-NC		1-G 1-NC		1-NC		1-NC		1-NC	
Tufts	1-R		1-R		1-G 1-PG 3-R	1-G 1-PG 1-R	1-G 1-PG 1-R				1-R	1-R	1-G 1-PG 1-R	2-G 1-PG	1-G 1-PG 1-R
Detroit	3-G 3-PG	2-R	1-G 1-PG	1-G											

*Combined with the Dental Surgery courses.
**Under consideration.
***Psychology.

AMERICAN DENTAL ASSOCIATION
REFRESHER COURSES FOR SCHOOL YEAR 1950-1951

PRACTICE MANAGEMENT	PREVENTIVE DENTISTRY	ROENTGENOLOGY	RESEARCH	ROOT CANAL THERAPY	THERAPEUTICS	ORAL FACIAL PROSTHESIS	DENTAL MEDICINE	RESTORATIVE DENTISTRY	ORAL HYGIENE	BACTERIOLOGY	MOUTH REHABILITATION	BIOCHEMISTRY	CURRENT ADVANCES IN DENTISTRY	PHYSIOLOGY	GROSS AND NEURO ANATOMY	OTHERS
	3-NC	5-PG 4-R 5-NC		2-NC			2-G 2-PG 2-NC		1-NC							
1-R		3-R			1-R	1-R** 1-NC										
	1-PG		1-PG 1-NC													
	1-R 1-NC	5-NC		2-PG 2-R 2-NC					1-NC							
2-NC	3-NC	5-NC		2-NC		1-NC										1-NC
	1-G 1-PG	1-PG														
	4-PG 2-R		1-PG	2-PG 1-R	1-G		***			1-PG			1-PG 1-R	2-PG		
	1-NC	1-R 4-NC	1-NC	2-NC					1-NC							
		3-G 3-PG														
2-NC	3-NC	5-NC		2-NC												
		1-R 1-NC			1-R 1-NC					1-G 1-NC		1-G 1-NC		1-G 1-NC	1-G 1-NC	
			1-NC 1-G													
		1-G 1-PG 3-R	1-R													

	ANESTHESIA	CANCER OF THE ORAL CAVITY	DENTAL ANATOMY	DENTAL MATERIALS	DENTAL PROSTHESIS	DENTAL SURGERY	DENTISTRY FOR CHILDREN	DIET OR NUTRITION	GENERAL DENTISTRY	HISTOLOGY	OPERATIVE DENTISTRY	ORAL DIAGNOSIS	ORTHODONTICS	PATHOLOGY	PERIODONTIA
Michigan		1-G 1-PG		1-G	2-G 6-PG	1-G 1-PG	1-G 2-PG	1-G	1-PG		1-G 1-PG	1-PG	1-G 1-PG	1-G 1-PG	1-G 1-PG
Minnesota		1-R	1-NC 1-G		1-G 4-R 1-NC	1-G 1-R	1-G 1-R 1-NC				1-G 1-R 1-NC	1-G 1-R 1-NC	1-G 1-PG	1-G 1-NC	1-G 1-NC
St. Louis	1-PG		1-PG		2-PG	3-G 2-PG			1-PG		1-PG 1-NC		1-G 1-PG 1-NC	1-G	
Kansas City			1-NC		5-NC		1-G 1-NC		1-NC		1-NC		1-G 1-PG 1-NC	2-NC	
Wash. St. L.	1-NC	1-NC	1-PG	1-PG 1-NC	1-G 3-PG 3-NC	1-G 1-PG 2-NC	1-G 1-NC				2-NC	1-PG	1-G 2-PG	1-G 1-NC	1-NC
Creighton	No program														
Nebraska					1-R		1-G 1-R				1-R				
Columbia	4-PG	2-NC	1-PG		1-PG 1-R 1-NC	5-PG	2-PG	2-PG		2-PG 1-R 1-NC		1-PG 1-R 1-NC	1-PG 6-R 2-NC	1-G 2-PG 1-NC	1-PG 1-R 1-NC
New York	1-PG	1-PG	1-PG		5-PG	1-PG	1-PG	1-PG			2-PG		1-PG	1-PG	1-PG
Buffalo													1-PG		
Ohio	2-PG 1-NC	1-PG 1-NC	1-G 1-PG 1-NC		1-G 3-PG	4-PG	1-PG 1-NC	1-NC		1-NC	2-NC	1-G 1-PG	1-G 1-PG 1-NC	2-G 1-PG	1-G 1-PG
West. Res.		3-R 3-NC			2-R 2-NC					1-G 1-NC				2-G 2-NC	
Oregon	1-PG 2-NC	1-PG	1-PG 1-NC	5-NC	4-PG	2-PG	1-PG 1-NC			2-NC	1-PG	1-PG	1-PG	1-PG	1-PG
Temple	2-NC				1-PG 1-NC	1-NC	1-NC						1-PG		1-PG
Pennsylvania	1-PG	1-PG		1-PG	6-PG 1-G	1-G 1-PG	1-PG	1-PG			1-PG	1-PG	2-G 1-PG	1-G	1-PG
Pittsburgh	2-PG 3-NC	1-PG	2-NC	1-NC	2-G 2-PG 5-NC	1-G 1-PG	1-G 1-PG	1-NC	1-R 1-NC	1-NC	2-R 2-NC		1-G 1-PG 1-NC	2-NC	1-PG 1-NC
Meharry		2-NC 1-PG	1-NC	4-NC	1-PG 3-NC	1-PG 2-NC	1-NC		2-NC	1-NC	1-NC 1-PG	1-NC 1-PG		1-NC	1-PG 1-NC

AMERICAN DENTAL ASSOCIATION
REFRESHER COURSES FOR SCHOOL YEAR 1950-1951

PRACTICE MANAGEMENT	PREVENTIVE DENTISTRY	ROENTGENOLOGY	RESEARCH	ROOT CANAL THERAPY	THERAPEUTICS	ORAL FACIAL PROSTHESIS	DENTAL MEDICINE	RESTORATIVE DENTISTRY	ORAL HYGIENE	BACTERIOLOGY	MOUTH REHABILITATION	BIOCHEMISTRY	CURRENT ADVANCES IN DENTISTRY	PHYSIOLOGY	GROSS AND NEURO ANATOMY	OTHERS
	1-G 2-PG	1-PG		1-G 1-PG	1-G 1-PG				1-PG							1-PG
1-R		1-G 1-R		1-G 1-R												
		1-PG 1-NC														
	1-G 3-NC	5-NC														
		2-PG		1-NC	1-NC											
		1-R														
	1-G 1-NC	1-PG	1-G 1-PG 2-NC	1-R												6-PG 1-R 1-NC
2-PG		1-PG	1-G 1-NC	1-PG												
	3-NC	5-PG 5-NC	1-G 1-NC	1-PG 1-NC	3-NC											
			1-G 1-NC													
2-PG	1-PG	1-PG 2-NC	1-NC	1-PG	1-NC											1 NC
				2-PG							1 R					
	1-PG	1-G 2-PG		2-PG					1-PG							
	1-NC	1-R 5-NC	2-NC													
		1-PG 1-NC	1-NC	1-NC		1-NC										

COUNCIL ON DENTAL EDUCATION,
REPORT ON GRADUATE, POSTGRADUATE, AND

	ANESTHESIA	CANCER OF THE ORAL CAVITY	DENTAL ANATOMY	DENTAL MATERIALS	DENTAL PROSTHESIS	DENTAL SURGERY	DENTISTRY FOR CHILDREN	DIET OR NUTRITION	GENERAL DENTISTRY	HISTOLOGY	OPERATIVE DENTISTRY	ORAL DIAGNOSIS	ORTHODONTICS	PATHOLOGY	PERIODONTIA
Tennessee						5-PG	4-PG						5-PG		
Baylor	3-NC		1-PG 3-NC		6-G 6-NC	5-NC 2-G	3-G 2-NC			1-G 2-NC	3-G 1-PG 2-NC		2-G 1-NC	1-NC	1-G 1-NC 1-PG
Texas	No program														
Virginia	No program														
Wash.-Seattle	2-R 2-NC	1-R 3-NC	3 NC	4-NC	7-NC 7-G 1-R	2-R 5-NC	1-PG 1-R 1-G 4-NC	1-NC	1-R 2-NC 2-G	2-NC	1-G 3-NC	1-NC	1-G 1-PG 3-R 4-NC	2-NC	1-NC 1-R
Marquette				1-NC	4-NC	1-PG	3-NC 1-PG								
Army									1-PG						
Navy					PG	PG			PG						
TOTALS:															
Graduate-G	3	1	4	3	28	22	17	2	2	4	6	3	25	19	9
Post graduate-PG	16	9	10	2	61	44	25	7	6	3	13	8	34	14	17
Refresher-R	9	10	3	1	34	12	13	7	5	1	16	6	13	1	9
New Course-NC	25	27	25	37	69	49	30		9	19	26	13	21	23	11

The present summary includes a total of 174 graduate courses, 339 postgraduate courses, 180 refresher courses, and 523 new or potential courses, or a grand total of 1,216 courses. This represents an increase of 35 per cent over the 898 courses that were offered last year. In 1949-1950, there were 282 graduate students and 1,138 postgraduate students enrolled in the dental schools, and in 1950-1951, a total of 349 graduate and 1,381 postgraduate students enrolled in the dental schools. This represents a 22 per cent increase in the number of graduate and postgraduate students in 1950-1951 over the previous year. Only five of the forty-two dental schools do not offer advanced courses in 1950-1951. The following code is used on the two summary sheets, and a list of the administrators to whom inquiries should be directed relative to these advanced courses has been attached.

AMERICAN DENTAL ASSOCIATION
REFRESHER COURSES FOR SCHOOL YEAR 1950-1951

PRACTICE MANAGEMENT	PREVENTIVE DENTISTRY	ROENTGENOLOGY	RESEARCH	ROOT CANAL THERAPY	THERAPEUTICS	ORAL FACIAL PROSTHESIS	DENTAL MEDICINE	RESTORATIVE DENTISTRY	ORAL HYGIENE	BACTERIOLOGY	MOUTH REHABILITATION	BIOCHEMISTRY	CURRENT ADVANCES IN DENTISTRY	PHYSIOLOGY	GROSS AND NEURO ANATOMY	OTHERS	
		5-NC	2-G 2-NC														
2-NC	3-NC	2-R 2-NC	2-NC	2-NC 1-R	2-R 2-NC				1-NC						1-NC		
1-R		5-NC			1-R				1-R								
																	Totals
	4	6	6	2	2		2			1		1		1	1		174
4	10	26	3	12	1		2		2	1			1	2		6	339
3	3	17	1	6	5	1			1		1		1			1	180
6	22	56	15	15	8	3	2		4	1		1		1	1	4	523

THE WHITE HOUSE CONFERENCE AND ORTHODONTICS

J. A. Salzmann, D.D.S.,* New York, N. Y., and George R. Moore, D.D.S.,** Ann Arbor, Mich.

THE Midcentury White House Conference on Children and Youth, the fifth in the series of White House Conferences since 1909, was held in Washington, D. C., in December, 1950. This is the first White House Conference to which an invitation was extended to the American Association of Orthodontists. At the forty-sixth annual session of the Association, held at Chicago in May, 1950, the Board of Directors voted to accept the invitation of the Conference and turned it over to its Committee on Public Health for further action. President Johnson then designated the Chairman of the Public Health Committee and the Secretary of the Association to act as its accredited delegates at the Conference. The American Association of Orthodontists was then invited to serve on the steering committee on Participation of National Organizations in the White House Conference which included 464 national organizations. The Chairman of the Committee on Public Health of the American Association of Orthodontists was invited by the Conference to serve on the leadership team of the Work Group on Pre-Adolescence (children between 9 and 13 years) in Section I which dealt with furthering healthy personality development in children and youth. The American Association of Orthodontists was the only organization in dentistry to be listed in the Conference program and the Chairman of the American Association of Orthodontists' Public Health Committee was the only possessor of a D.D.S. degree to be listed in the Conference program.

A tentative statement on the present status of orthodontics as a factor in child health was prepared and submitted to the Conference by the Public Health Committee of the Association, as were statements of other leading national organizations, including the American Dental Association. These statements are now available for background reference in the forthcoming Conference publications. The American Association of Orthodontists' statement was published in the American Journal of Orthodontics in December, 1950, and reprints are now available for those who desire them. It is the intention of the Public Health Committee to use this statement in gathering new and additional information on the public health phase of orthodontic service and to make the information available to interested agencies.

We shall relate briefly the origin of the White House Conferences before we turn to the 1950 Conference and its relation to orthodontics.

The first White House Conference was called by President Theodore Roosevelt in 1909. As a result of that Conference, the Children's Bureau was

Read before the Forty-seventh Annual Meeting, American Asociation of Orthodontists, Louisville, Ky., April 25, 1951.

*Chairman, Public Health Committee, American Association of Orthodontists; Delegate to the White House Conference on Children and Youth, 1950.

**Secretary, American Association of Orthodontists; Delegate to the White House Conference on Children and Youth, 1950.

established. President Wilson in 1919 called the second White House Conference, the high light of which was the setting of standards for children entering employment and the protection of the health of mothers and children, especially those in need of special care.

Under President Hoover, in 1930, the White House Conference convened 1,200 experts for study of the "whole child" as related to medical services, public health and education, and the training of the handicapped. Thirty-two volumes were published on the findings of the 1930 White House Conference. Many of these volumes have since become standard texts in the respective fields to which they relate. The so-called Children's Charter, a set of recommendations concerning the rights of all children, the aims toward which the 1930 Conference hoped to lead public thought and action for children, was adopted at that Conference. It presaged a great advance in pediatrics and pediatric education. The 1930 Conference was the first to give attention to growth and development of children among which were included the dental and orthodontic phases.

The fourth Conference called by President Franklin D. Roosevelt, in 1940, was limited because of the war economy. However, the Conference helped to determine how children in a democracy can be helped to grow into the type of citizens who will be interested in preserving and protecting such a democracy.

At the Midcentury White House Conference on Children and Youth, called by President Truman, there were approximately five thousand delegates in attendance. These came from all states, from all the territories, and from a score or more of foreign countries. All races, colors, creeds, and ages were represented.

The primary purpose of the Conference was to attempt together to achieve for each child a fair chance to develop a healthy personality. The task of the delegates was to consider "how we can develop in children the mental, emotional, and spiritual qualities essential to individual happiness and to responsible citizenship, and what physical, economic, and social conditions are deemed necessary to this development.

Outstanding speakers addressed the general sessions. Specific angles of personality development were discussed in panel groups. The heart of the Conference work, however, was represented by the 35 work groups. These dealt concretely with issues and problems involved in attaining the Conference goals. Their work fell in five main areas:

1. Healthy personality development in children and youth.
2. Furthering healthy personality development through the family, the church, and the school.
3. Making more positive the influence of religious, social, and economic forces on personality development.
4. Furthering healthy personality development of children in special situations, such as children in families with inadequate incomes.
5. Mobilizing citizens for the improvement of conditions affecting the personality development of children and youth.

At the close of the Conference, a platform was adopted as well as a PLEDGE TO CHILDREN.

The question may well be asked: What does the foregoing statement have to do with orthodontics? In reply, one might say that the practice of orthodontics does not exist in a vacuum. We cannot shut ourselves up in an ivory tower and imagine that social change will not touch us. It is the purpose of this paper to present a few of the many points which relate orthodontics to other professional fields touching children and to point out some of the influences of child personality development which affect success in orthodontic therapy.

In order to consider the whole child, it was deemed advisable by planners of the 1950 Conference to cut across professional disciplines and interests by bringing together in work groups persons representing as many fields as possible having either as their entire interest, or one of their major interests, the spiritual, physical, and educational welfare of children. Each work group included educators, social workers, vocational counsellors, pediatricians, psychiatrists, nurses, and public health administrators. In this way, an opportunity was afforded to the delegates, through the work groups and thirty panel discussions, to obtain some insight into the problems which confront professional people concerned with children in fields other than their own.

There was no attempt made by anyone responsible for running the Conference to dictate to the delegates, nor, as was feared in some quarters, to push "socialized medicine or dentistry." The leadership was directed to the objective that community groups should re-examine their attitude with respect to meeting the needs of children and youth on the broadest possible community sponsorship, to initiate standards and gather facts, and above all that "people as individuals and as groups should be helped to help themselves." Great emphasis was placed on bringing parents into closer participation in thinking and planning for their children. Emphasis at the Conference was away from the "hand-me-down" attitude in which everything is intended to be done for the citizen by the Federal government.

The findings and platform adopted by the Conference which represent every phase of child health and welfare will be published in a series of reports. These will make not only interesting reading from a cultural standpoint, but will serve, if we may be guided by previous experience, as standard reference texts for planning in all fields of child welfare. Most of the individual states had been asked to hold their own "White House Conferences" under the leadership of state delegations. The delegates of the respective states will continue to plan on a state level. They may use the findings of the White House Conference if they so desire, or may set up programs of their own.

While over one hundred fifty physicians actively participated in the 1950 White House Conference, only about twenty dentists attended the Conference. The small number of dentists attending the Conference was no doubt due to a misunderstanding in which it appeared to the leadership to the American Dental Association that it was being ignored. The fact is that the Conference

was not organized along strictly professional lines, but rather according to child needs from birth to maturity as they cut across professional lines.

Dentists in attendance at the Conference, representing the American Dental Association, American Association of Orthodontists, and American Public Health Dentists' Association, however, took advantage of the opportunity by adopting and forwarding to the Conference Committee on Platform the following resolutions on dental health:

1. The individual's responsibility
   a. Proper diet.
   b. Good mouth hygiene.
2. The dentist's responsibility
   a. To provide proper dental care for those who seek his services.
   b. To participate in community planning and implementation of community programs.
3. The community's responsibility
   a. Dental health education.
   b. To establish community dental caries prophylaxis programs such as water fluoridation, topical fluoride programs in schools, etc.
   c. Provide dental corrective care for those who cannot purchase this service privately.
   d. Support expansion of basic dental research and the development of more effective measures for preventing, treating, and controlling dental diseases.

The thirty-five work groups dealt concretely with the problems and issues which were later adopted in the form of Conference Findings and Platform. At a final general session of the Conference, plans for future action were adopted, based on findings of the work groups; and the announcement was made of the forthcoming publication of the reports of the findings and platform adopted by the Conference.

At the completion of the sessions of the various work groups, certain findings were presented. The Committee for Conference Recommendations included the following among the statements which it adopted:

"The Conference by its very nature does not bind any participant or group to its detailed recommendations. At the same time, its platform will set up the broad basic objectives for work in the years ahead. These recommendations, it is hoped, will inspire, sustain and guide the American people in intensifying their efforts to assure a better life for all children and youth."

The platform adopted by the Midcentury White House Conference included among others the following recommendations on the health of children:

1. That professional workers be trained in such a way that they will understand and respect other professional skills and contributors so that they may work together to further community growth. Some of the ways that this might be achieved are:

a. In all levels of undergraduate education, students should receive broad preparation in the knowledge of human growth, behavior, and motivation

which ought to be common knowledge for all students. This would also serve as a background for professional education.

b. In schools preparing for professional work, there should be included in the curriculum through both the classroom and field experience opportunities for cooperative work on problems common to all professional interests, including study in human growth and change and in family counseling.

c. The practitioner should further his training by seeking, utilizing, and promoting opportunities to relate to, and participate with, other professional and citizens groups in resolving problems of the individual and the community.

2. That all professions dealing with children have, as an integral part of their preparation, a core of common experiences on fundamental concepts of human behavior including (1) the need to consider the total person as well as any specific disorder; (2) the interrelationship of physical, mental, social, and cultural forces; (3) the importance of interpersonal relationships and the role of self-understanding; (4) emphasis on the positive recognition and production of healthy personalities and the treatment of variations; (5) that lay people be oriented through formal or informal education to an understanding of the importance of the foregoing concepts.

With regard to health services, the Conference found:

1. All health services contribute to the development of personality.

2. Present health services have many inadequacies, particularly in relation to furthering healthy personality development in children and youth. Many now rendering such services do not fully understand nor give attention to the dignity and emotions of the individual child, which are necessary to healthy personality development. Furthermore, the role of the individual as a member of the family and community is often overlooked. These lacks may in some instance actually contribute to unhealthy personality development.

3. Essential to the successful operation of health services at the local level, in peace and in war, is a full-time local health unit with a balanced staff fully cognizant of the importance of personality development.

4. It is imperative that local funds available for child health be supplemented with funds and other resources of the state and of the nation.

5. The success of the present mobilization of armed forces, industry, and civil defense is to an important degree dependent on the provision of adequate health services to mothers, children, and youth.

It was shown primarily that the understanding of the child himself by parents, teachers, and professional personnel is more important than the specific methods and techniques used. Furthermore, the training of all professional personnel concerned with children should be evaluated in terms of providing greater insight into child development and interpersonal relationships.

It was stressed that those who deal with children—and this includes the orthodontist who comes into intimate contact with children during their most

important developmental period—have a continuing opportunity for constructive modification of the personality of the child.

Because of the serious implications to personality development, remediable defects in children, including dentofacial abnormalities, should be corrected wherever possible before the child reaches the end of the preadolescent period. Children with nonremediable defects should be helped to understand their limitations and to develop their optimal capacities. Professional personnel should understand that since adolescence begins at different times for boys and girls and among individual children, special problems are created for those who mature earlier or later than the majority of their age mates. These problems require awareness and understanding of those dealing with children.

With regard to severe physical and mental limitations of children, it was found that such children require special considerations and services. There is need for adequate educational and treatment programs for all handicapped, and it is the responsibility of departments of education, health, and crippled children's agencies, public and private, to accept leadership in securing such services. In the foregoing, it was stressed that distinction must be made between handicaps that are easily recognized by the observer, such as cleft palate and other dentofacial abnormalities, cerebral palsy, deafness, and lameness, and those handicaps which the observer cannot easily discern, such as cardiac diseases and poor eyesight.

It became more and more apparent as the Conference developed that the health professions have been accepted by the social scientists as part of their group. As seen by the social scientists, the practice of the health professions including the various specialties is only another form of social service. The obligation of the profession to the public welfare is thus taken for granted. We no longer have any need to tell educators, social workers, or public health personnel that children should receive preventive medical care and immunization against contagious diseases or that handicapping conditions, whether mental or physical and whether or not they are immediately apparent to the observer, should be eliminated.

By the same token, those concerned with the health and welfare of children know that dental care, and specifically orthodontic service, is important to the personality development of healthy children. This is an accepted fact.

From an immediate and practical standpoint, we believe that the Conference has pointed out to us as practitioners of orthodontics that, in addition to our technical knowledge, we, together with others concerned with children, such as physicians, general dentists, health officers, nurses, and nutritionists, must seek further training in human relations if we are to make a maximum contribution to children through the specific service we render.

Our colleges should give heed to the personality endowment of students to ascertain whether they are suitable to become practitioners of specialties concerned with children. It is a waste of human values, educational effort, and finances to train practitioners who are basically unfit to practice their specialty on children.

We must know and understand our patients in order to treat them successfully. Children will accept orthodontic therapy if the reasons for the procedure are explained to them in terms they can understand. Impatience with the child places him on the defensive and diminishes confidence in himself and his orthodontist. Patience in listening to the child patient will make the work of the orthodontist easier to accomplish. Information given the child should be authoritative, without hesitance, once a course of treatment has been decided upon. Blind obedience, however, should not be expected of American children. It may at times be beneficial to the child to postpone certain procedures until the child can be made to feel the need for them in his own personality adjustment. The helpful and sympathetic attitude of the orthodontist can indeed make even painful procedures constructive growth experiences for children. The effectiveness of the orthodontist is diminished in proportion as his attitude to the child becomes intolerant and resentful.

Parent cooperation is a recognized factor in all child services. While the rights and feeling of the child must be respected, the parents must be brought into the "team." While children may motivate their parents into bringing them to the orthodontist, it is usually the parent who induces the child to accept treatment. The parent must be told in simple understandable language the importance of his continued interest and cooperation in the treatment to be undertaken. The orthodontist should cultivate a friendly professional relationship but should guard against too intimate "social" entanglements with parents. There is greater need for fostering a kindly parent-child relationship rather than for asking parents to "police" the treatment which results in undue parent-child tensions. Too little time and attention is given in explaining to parents their role in the successful termination of treatment.

With the foregoing objectives in view with regard to orthodontic practice, it is recommended that attention be paid by the members of this Association to periodical and textbook literature, influenced by the Midcentury White House Conference, which will soon make its appearance.

654 Madison Ave.

AFTER FIFTY YEARS*

B. E. Lischer, D.M.D., St. Louis, Mo.

AS WE meet today at this annual luncheon of past-presidents to mark the fiftieth anniversary of the founding of the American Society of Orthodontists it is fitting that we pause, if ever so briefly, for a summing up of our accomplishments.

As one of the fortunate members who were present at the First Annual Meeting held in the Academy of Science of St. Louis, June 11-13, 1901, I recall the enthusiasm and high hopes of the charter members on that happy occasion. Dr. E. H. Angle presided and Drs. Pullen, Brady, Summa, Walker, Munroe, and Lourie provided the program. I was a young fledgling in those days when President Angle introduced me as a guest at one of the afternoon sessions. I had not the slightest intimation then that I would be asked to address you today (after fifty years) as a past-president.

On an occasion such as this one is inclined to retrospection, to weigh and consider the difficulties we have thus far overcome, and to appraise those acts which we shared in cooperative efforts for the good of all. It seems to me it is unnecessary to recount all the difficulties which retarded the growth and development of the art and science of orthodontics for so many decades—they are known to you. Surely it is reasonable to say that, but for the founding and vigorous activities of our Association, orthodontics would in all probability still be an infant in the household of dentistry.

There are numerous philosophies of history and some parts of our history are as yet unwritten. The travail of man on this earth has recorded much authentic evidence for compiling the annals of civilization. Whether one accepts the Christian synthesis of St. Augustine of the fourth century, or the modern notion that progress, somehow, is inherent in the scheme of things (because of our rapid scientific advance), let us remember that an honest, critical analysis of the past compels us to admit that *progress is not inevitable.* The development and growth of the arts and sciences, the intermittent triumphs of the humanities, all spring from the minds of good and great men and women who analyzed life's problems and devised ways and means for its improvement.

We owe a considerable debt of gratitude to many valiant pioneers who developed our art and its educational methods under very trying conditions, especially before dental schools became integral divisions of universities, when dental educational aims were almost wholly vocational. How fortunate we are that many of our university dental schools now offer fairly adequate courses for the training and education of a specialist. It is gratifying to emphasize the progress of orthodontic education during the last fifty years, for prior to 1900 the training and education of an orthodontist was unavailable.

*Remarks at the Past-presidents' Luncheon, American Association of Orthodontists, Louisville, Ky., April 24, 1951.

As long as I live I cannot forget the difficulties which confronted me when, as a recent graduate in dentistry (April 24, 1900—fifty-one years ago), I decided to become an orthodontist. The undergraduate instruction during my student days was far more deficient than it is today. So I turned to the first special course—of four weeks' duration—then being offered. Unfortunately, being a resident of St. Louis, where the course was then given, I was asked to sign a contract to locate elsewhere on completion of the month's instruction. Needless to add I deeply resented this requisite for enrollment and firmly resolved, then and there, to become an orthodontist, notwithstanding the absence of other educational opportunities.

Thus I began, unaided and alone as the pioneers of old, to investigate the frontiers of our knowledge of dental anomalies.

We have been fortunate in our quest for greater certainty to be able to avail ourselves of the accepted methods of present-day science. All assumptions, false theories, and emotional bias may now be eliminated from orthodontic knowledge, for the discipline of science is one "where you cannot lie even to yourself. If you do, the experiment will be ruined and others cannot check the results."

Beginning with Fauchard in the eighteenth century, our specialty has been favored by a long list of capable workers. We have come a long way since Fauchard's day and now grasp many basic principles on which our scientific progress is based. Although some of our pioneers were poorly trained (sometimes not at all, judged by present-day standards), nevertheless their minds were frequently stimulated by their experiences, which forecast what would someday be achieved by scientific methods. Without venturing into detail, we can say that many of our basic principles and essential procedures are the product of countless contributors. "No one has of himself become what he is; everyone stands on the shoulders of his predecessors."

As a clinical instructor in Washington University School of Dentistry over fifty years ago, I could not fail to note the widespread incidence of dental anomalies among the many hundreds of patients seeking dental services. I did not find it difficult to gain the consent of some patients (and their parents) to begin treatment of their dentofacial deformities. Dental literature during the first decade of this century contained numerous articles on the correction of anomalies. Textbooks were not difficult to obtain and ideas, and ideals, could not be confined to a select few.

Orthodontics was a very minor subject in the dental curriculum of those days. Owing to the dental school's inadequate budget and my interest in, and enthusiasm for, the subject, I was asked to take over its teaching. This assignment brought greater opportunities as well as responsibilities to me and, before many years, I was on my way to become a specialist. Some of my young colleagues have commented on the apparent ease with which one could in those early days become an orthodontist. It is true, there were no state laws regulating the practice of orthodontics—other than the requirements governing the practice of general dentistry—nor specialty boards to issue certificates of competency. Neither were willing patients as plentiful as now; even dentists

had to be convinced that the correction of an anomaly was possible, as well as desirable.

When interest in correcting dental anomalies become widespread and dental school budgets were even more inadequate than they are today, college faculties frequently nursed the golden dream that a large orthodontic clinic would prove a profitable enterprise. Accordingly, since patients in need of orthodontic therapy were plentiful, at least one patient was assigned to every senior student. The fees charged for this service were believed to provide a new and growing source of income. A careful search of all clinic records would not disclose a single contribution to orthodontic knowledge which emanated from such methods of teaching.

Unfortunately, this erroneous attitude toward orthodontic clinic service is, even to this day, occasionally carried over into graduate courses in a few university schools of dentistry. Graduate students are not only charged a large tuition fee, but the patients assigned to them are also asked to pay liberally for the services, so as to bolster the department's income. In the long run such methods do more harm than good and, in my humble opinion, it is not a praiseworthy nor satisfactory way to conduct a dental school clinic and a department of orthodontic education.

The late Justice Oliver Wendell Holmes once remarked that "every occupation is great when greatly pursued." Let us not forget that dentistry developed as a vocation in response to human need, to relieve pain and suffering, to eradicate oral diseases, deformities, and mutilations. Many of its problems have their roots in the same biologic soil as do the problems of medicine. The former widely prevalent disdain of the educational problems of dentistry is yielding to a growing awareness of the absurdity of setting up artificial barriers between the various fields of knowledge. Contemporary dentistry subjects its theories, hypotheses, and methods of procedure to scientific scrutiny; hence it challenges the highest type of constructive idealism. In brief, dental scientists employ the same operational methods as workers in the natural sciences. It is a field of knowledge and service worthy of our best efforts.

I cannot forego mentioning the many opportunities which lie ahead for the young men and women now taking up the study of dentistry. As Karl Pearson expressed it in his *Grammar of Science* (ed. 2, 1900), "The field of science is unlimited, its material is endless; every group of natural phenomena, every phase of social life, every stage of past and present development is material for science. The unity of all science consists alone in its method, not in its material."

Owing to our enlarged understanding of the nature of the world and of man, we have come to realize that human life has only such ends as we set up for it—individually and collectively. To promote the quality and usefulness of these ends we must continue to put our best efforts into our daily tasks. This implies cultivating worthy objectives for our profession, for ourselves, for our dependents, and for old age. And all these are dependent on good health, on joy in our work, on an intelligent appreciation of the durable values of life. This "kingdom of the good is within human experience."

In times like the present, after enduring the most cruel wars in the history of mankind, and while another world war seems imminent, it may appear inconsistent to speak of ideals, of moral values and ethical principles, to urge continued devotion to precepts formulated by our predecessors—when life was certainly more tranquil and settled. Let us not forget that they could not foresee the turmoil of our age which the industrial and mechanical revolutions threw into our lap. Fortunately, we are justified in believing that mankind will again return to the arts of peace and seek, as never before, to heal the wounds of war. In that happy Springtide, the first faint gleams of which seem even now to illumine our sky, men will recall the noble comment on the French Revolution by William Wordsworth:

"Bliss was it in that dawn to be alive
And to be young was very heaven."

313 N. Rock Hill Road.

THE PRINCIPLE OF THE ANDRESEN METHOD OF ORTHODONTIC TREATMENT, A DISCUSSION BASED ON CEPHALOMETRIC X-RAY ANALYSIS OF TREATED CASES

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THE purpose of this paper is to give a brief account of the principles involved in activator treatment according to the Andresen method of orthodontic treatment or, as it is also referred to, the Norwegian system or functional jaw orthopedics.

This method, which is based on the use of a monobloc acting simultaneously on the dental arches of both jaws, was developed by Andresen into a practical and efficacious form of treatment which in certain cases of malocclusion partly or wholly supersedes the use of fixed appliances. The use of a monobloc in orthodontic treatment dates back to Robin at the beginning of this century.[5] The monobloc devised by Andresen[1] is termed the activator.

The results achieved with the activator vary considerably for different types of malocclusion, and the following is mainly concerned with a discussion of its mode of operation as indicated by x-ray analysis of treated cases.

The classification of the malocclusion used refers to the morphologic pattern and to functional bite disturbances and not to the etiology, as hereditary and environmental effects are usually difficult to distinguish in individual cases. Only such bite characteristics which are of especial importance to the design of the activator will be dealt with.

The design of the activator follows a number of different lines according to the predominant bite characteristics, and these different types may be more or less combined in actual treatment.

GROUP I. PRONOUNCED MAXILLARY OVERJET IN COMBINATION WITH NORMAL OVERBITE, NORMAL INCLINATION OF INCISORS, AND NORMAL SPACING OF THE TEETH (FIG. 1)

In this group of malocclusion the dental arches of both jaws may be normally developed, but displaced sagittally owing to a pronounced difference in maxillary and mandibular basal (facial) prognathism (Fig. 1, a^1 and a^2). (The distribution of the difference in basal prognathism in Swedish male adults is given in Fig. 2. A detailed description of the method of measurement used will be found in earlier publications.[2, 3, 4])

In procuring the construction bite in wax the lower jaw is forced forward into what might be considered the objective normal occlusion as compared with the patient's occlusion (Fig. 1, b^1 and b^2), with a slight opening of the bite up to, but not exceeding, the rest position of the mandible, in order to facilitate the mechanics of the construction of the appliance. This is how the wax bite is taken.

This paper was given at the Northwestern University Orthodontic Seminar, Nov. 28-30, 1949.

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The activator is constructed in accordance with the wax bite as a monobloc or a single unit appliance (an upper and a lower base plate joined together), including the lingual surfaces of all the upper and lower teeth, the palate of the maxilla, and the lingual surfaces of the alveolar process of the mandible, and covering the occlusal surfaces and the incisal edges of the teeth in both arches (Fig. 1, b^2 and e), together with an upper anterior arch wire extending passively

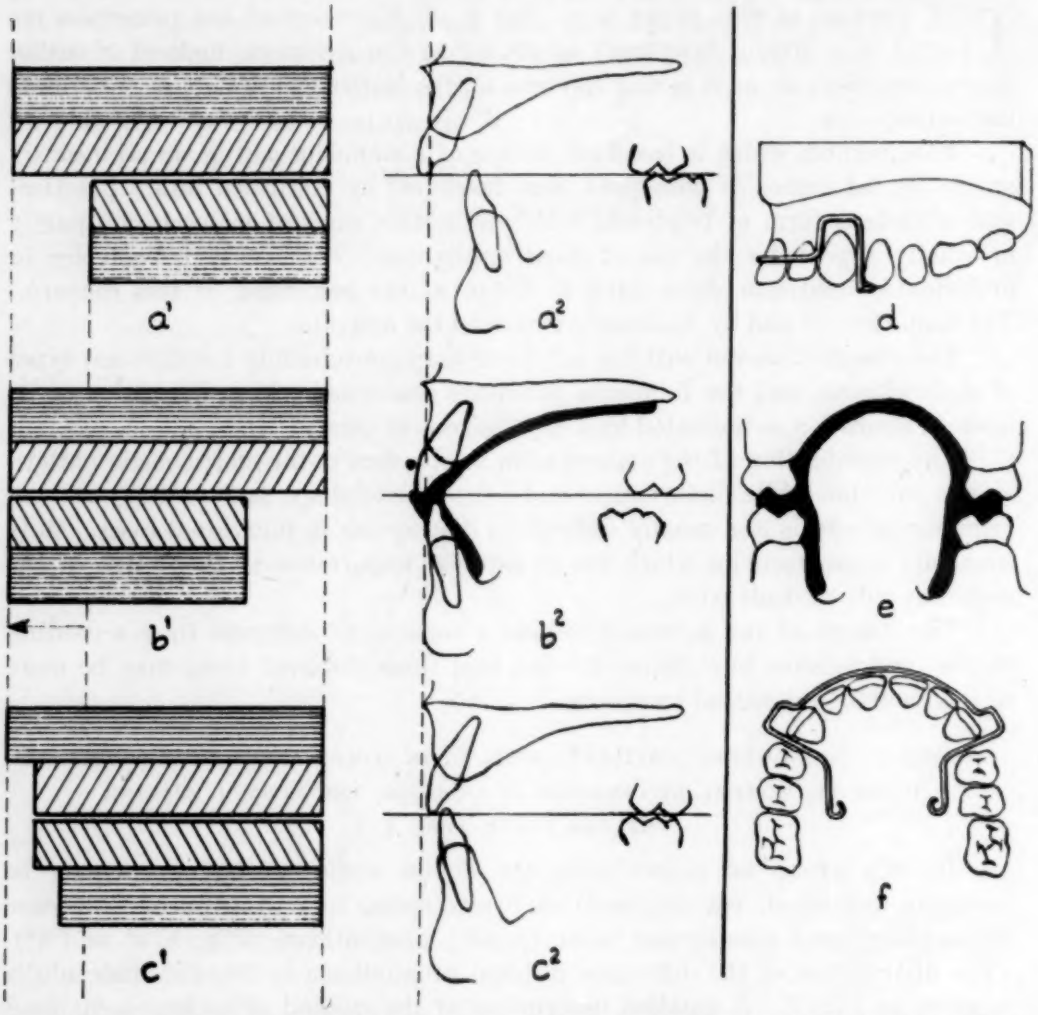

Fig. 1.—Group I. Diagrammatic representation of activator treatment in the case of pronounced maxillary overjet in combination with normal overbite, normal inclination of incisors, and normal spacing of the teeth. The portions indicated by vertical lines in the left column indicate the dental and alveolar arches, while the horizontal lines denote the jaw bases.

from cuspid to cuspid as in a Hawley retainer (Fig. 1, d and f). For details of the actual manufacturing procedure employed in the construction of the activator reference is made to the description given by Andresen and Häupl[1] and others.[6, 10]

When the mandible is moved mesially to the construction bite position (Fig. 1, b^1 and b^2), the powerful forces exerted by the mandibular musculature tend to return the mandible to its original position. Since the activator locks

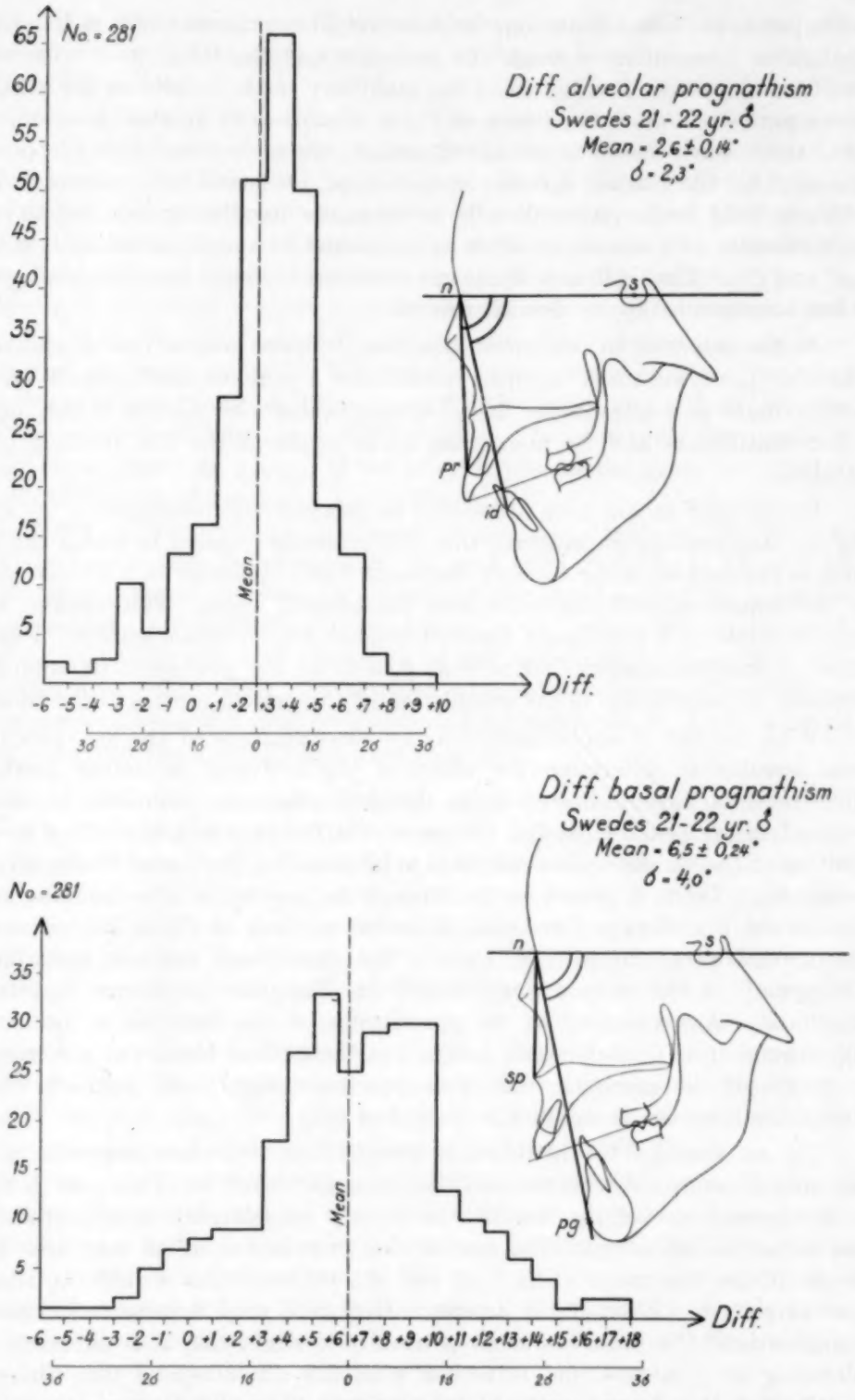

Fig. 2.—Distribution of values of differences in prognathism between upper and lower jaw in adult Swedish males, expressed in degrees. The difference is positive when the prognathism is greatest in the upper jaw, and negative when greatest in the lower jaw. The upper diagram shows the distribution of differences in the alveolar, and the lower, of the basal prognathism.

the upper to the lower dentition, the force returning the mandible to its original position is transmitted through the activator and the labial arch wire to the maxillary dentition, moving all of the maxillary teeth distally as the mandible over a period of one or two years, or more, returns to its original position. The lower teeth, being locked to the upper teeth by the activator and held in position lingually by the lingual alveolar extension of the mandibular portion of the activator, tend not to return distally as far as the mandibular base, but to retain their relation with the upper teeth as positioned by the construction bite (Fig. 1, c^1 and c^2). That is to say, the lower dentition has been moved mesially, more or less accompanied by its alveolar process.

As the activator in this group has been designed with a view to employing muscular force sagittally in order to achieve a sagittal displacement between the maxillary and mandibular dental arches as a whole, the bite is only opened a few millimeters and no more than corresponds to the rest position of the mandible.

Häupl[1] and others have attempted to demonstrate histologically, by carrying out experiments on animals, that the muscular tension to which the mandible is exposed by being forcibly displaced forward results in a growth change in the temporomandibular joint and the glenoid fossa. This change would then give rise to a permanent forward displacement of the mandible. Furthermore, it was maintained that normal growth of the jaw could be stimulated, affecting its length, due to the stimulation of the growth centers at the condyles.

With the aid of cephalometric x-ray measurements of treated cases it has been possible to determine the effect of the activator in actual treatment. Measurements have indicated quite decisively that the mandible resumes its original distal position in the course of the treatment—the relative forward position of the mandible does not seem to be measurably affected by the activator treatment. There is consequently little or no possibility of a jumping of the bite unless it suffers a functional disturbance, such as distal displacement of the mandible in the glenoid fossa. The functional analysis according to Thompson[12] is therefore a very important diagnostic procedure in activator treatment. A comparison of the prominence of the mandible at rest and at full closure from cephalometric x-rays, i.e., the path of closure or a comparison of x-rays of the condyles with these two positions,[9, 11] will indicate whether such a displacement or mobility is present or not.

On an average the mandibular prognathism increases somewhat during the growth compared with the maxillary prognathism.[2, 3, 4] This growth change in the prominence of the mandible may vary considerably in magnitude from individual to individual. The mandibular prominence which may arise in the course of the treatment (Fig. 1, c^1 and c^2) evidently lies within the range of normal growth. Even if the activator treatment may have some influence on the growth of the jaws, the effect is usually so slight that it is advisable when planning the treatment not to reckon with any effect beyond that which may result from the change in the alveolar arches. The alveolar arches react more quickly and more extensively to muscular force than other parts of the facial

skeleton. The x-ray analysis will therefore show that the effect, in similarity with treatment employing fixed appliances, is mainly confined to a reshaping of the alveolar arches.[4, 5]

Cephalometric analysis has indicated, however, that if activator treatment is resorted to at an early stage, i.e., to the deciduous or mixed dentition period, a greater part of the alveolar process will be altered than would be the case with a shorter period of treatment applied at a later stage and effected with more powerful forces, such as applying intermaxillary elastics. In other words, the treatment will have greater effect on the apical base of the dentition.

Therefore, in taking advantage of the mandibular return to a normal temporomandibular articulation from its construction bite position and the muscular forces connected therewith, this type of the activator is most effective in the treatment of deciduous dentitions (ages 4 to 7 years), and a little less effective in the mixed dentitions (ages 8 to 12 years). In permanent dentitions, on the other hand, where the growth of the alveolar process has proceeded further, the effect of this type of treatment is very limited.

The effect of the activator treatment on the jaw structure may be illustrated diagrammatically by sketches a^1, b^1, and c^1 in Figs. 1, 7, 12, and 16. These sketches indicate the essential changes which can be observed by means of cephalometric x-ray analysis of treated cases in the various groups discussed. In practice the result will vary from case to case, according to the growth type of the individual. The effect of treatment when using the basic types of activator discussed here will also be illustrated by means of an x-ray analysis covering one typical case within each group.

Case 1.—This case concerns a 4-year-old boy with normally developed dental arches in both jaws, but with pronounced difference in the sagittal position of the jaws as a whole. The difference between the basal prognathism of the upper and lower jaws was no less than 13.5° (see Fig. 3, A). No dislocation was present. An activator was constructed at the time, as previously described, the only effect of which was to lock the mandibular dental arch to that of the mandible in a normal sagittal position. The activator used is depicted in Fig. 6. The activator remained in actual use up to the age of 7, when a normal sagittal position of the dental arches had been attained (Fig. 3, B). A new passive activator was then made, and this was used until the boy was 9 (Fig. 3, C). Changes in the jaw structure which took place during the time the active and passive activators were in use are illustrated by the diagrams in Fig. 4.

It will be seen from these diagrams that the growth changes in the facial skeleton were identical during the two periods, the only differences being found within the alveolar arches. The maxilla exhibits a tendency during both periods toward diminished prognathism, amounting to 0.5°, whereas the mandibular prognathism has increased by 2.5° in both cases. This must be considered to lie within the normal range of growth changes in jaw structure of the individual.

The alveolar prognathism, on the other hand, diminished by 2° in the upper jaw and increased by 3° in the lower jaw during the active period, while it increased in both jaws during the passive period, in the course of which the

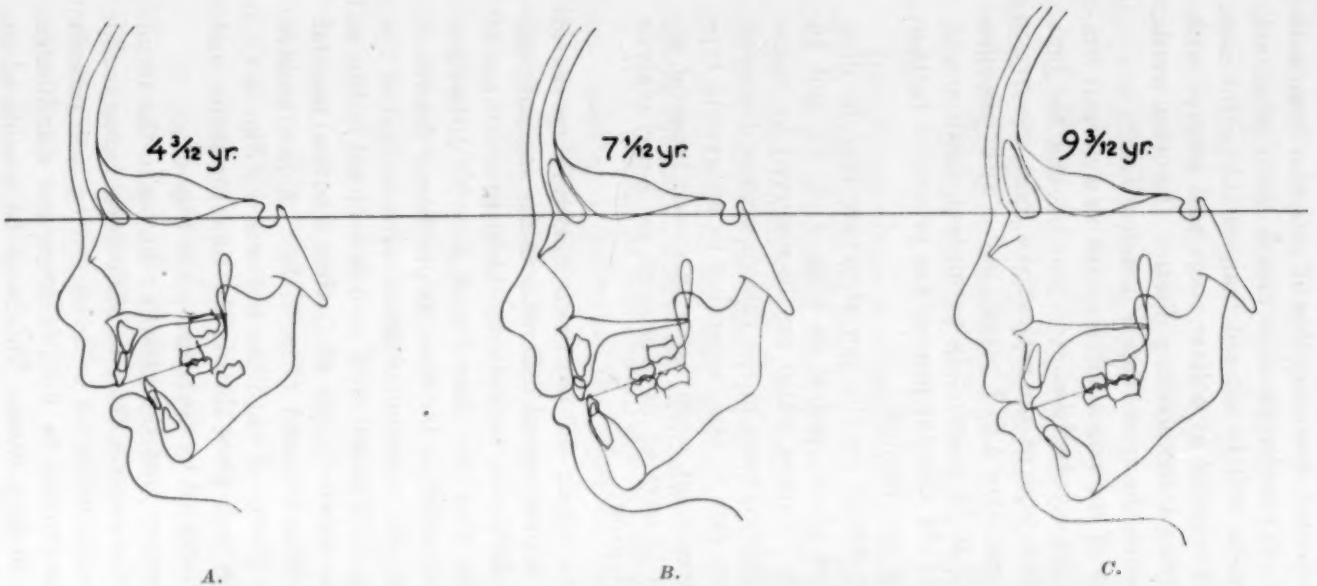

Fig. 3.—Case 1. Activator treatment applied to a 4-year-old boy with pronounced maxillary overjet. *A*, Before treatment; *B*, after end of active treatment; *C*, after end of passive treatment.

permanent incisors erupted. A comparison of the contours of the lower jaw (Fig. 5) shows that the increase in length has been dominated by apposition at the dorsal margin of the ramus, while the growth increase in height at the condyles is in this case smaller in proportion. The changes in occlusion achieved

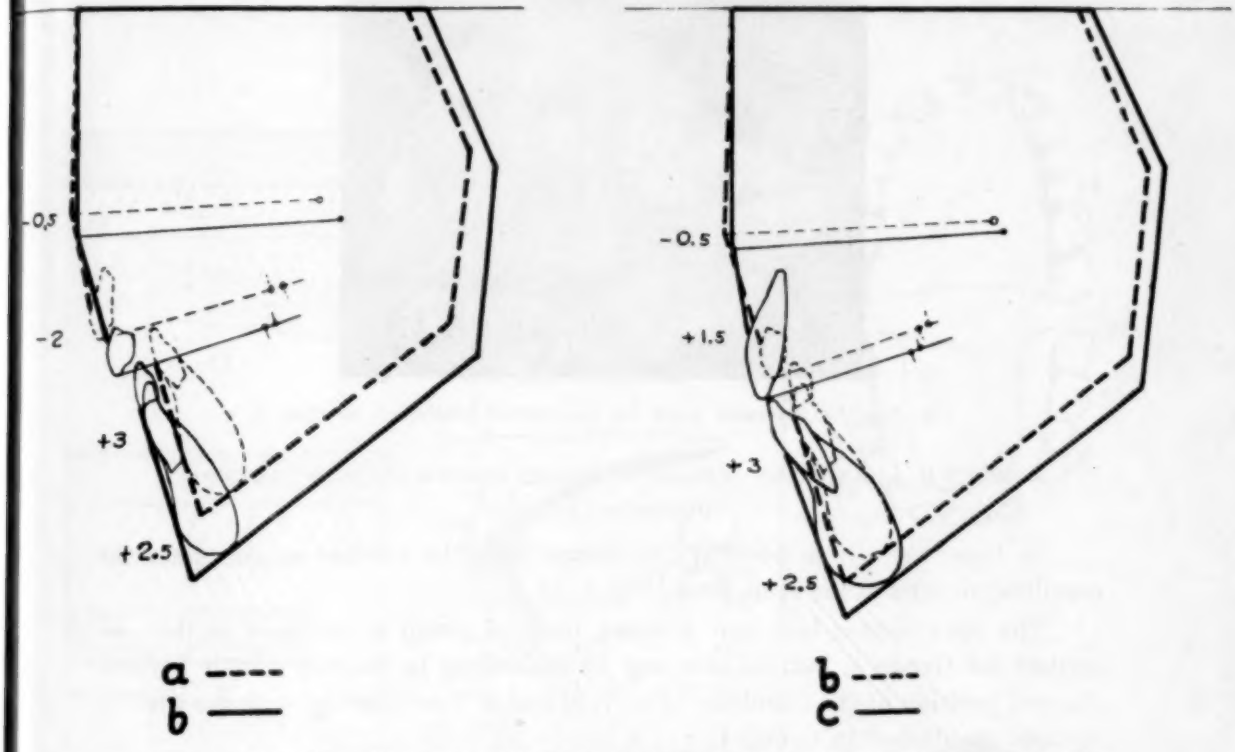

Fig. 4.—Cephalometric x-ray analysis of Case 1. The left figure indicates the change in facial pattern and occlusion during the active treatment period (*a-b*), and the right figure (*b-c*), during the passive period of treatment. The changes in prognathism in the jaw bases and alveolar arches are indicated on the figures in degrees.

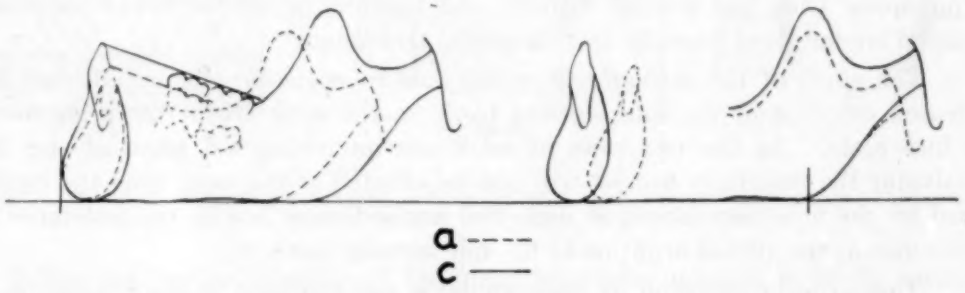

Fig. 5.—Growth changes in the lower jaw in Case 1. The external contours at the ages of 4 and 9 are superimposed, in the sketch on the left from the chin, in the sketch on the right from the jaw angle.

by the treatment may be attributed to the alteration brought about in the alveolar arches. The growth changes in the facial skeleton beneficial to the bite by virtue of reduced facial prognathism in the maxilla and increased facial prognathism in the mandible must be regarded as a growth change normal for

this particular individual. The rearward growth direction of the maxilla is also indicated by the more rearward position of the pterygomaxillary fissure during growth in this case (Fig. 4).

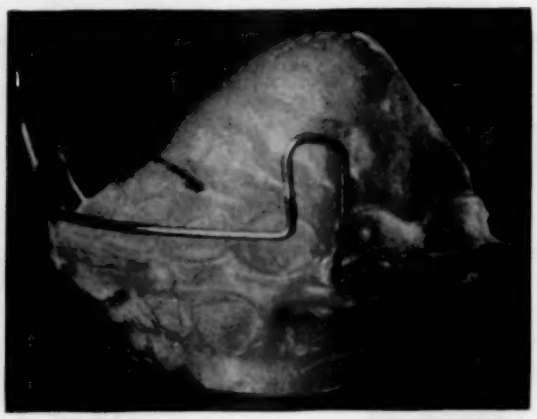

Fig. 6.—The activator used for the active treatment in Case 1.

GROUP II. MAXILLARY OVERJET IN COMBINATION WITH DEEP VERTICAL OVERBITE (FIG. 7)

In these cases it is necessary to reduce both the vertical overbite and the maxillary overjet at the same time (Fig. 7, *a*).

The construction bite that is taken for this group is the same as that described for Group I, but the bite may be opened up to, or even a little beyond, the rest position of the mandible (Fig. 7, b^1 and b^2), contrasting with the slighter opening mentioned in Group I.

The fabrication of the activator for this group of cases is the same as that described for Group I, except that after processing, the acrylic material is cut away between the occlusal surfaces of the lateral segments (Fig. 7, *d* and *e*). The upper teeth are guided distally and buccally while the lower teeth are guided mesially and buccally by this special trimming.

The effect of the activator is in this case to open the bite by allowing increased eruption of the side segment teeth, in the same manner as when using a bite plate. As the two rows of teeth are interconnected sagittally by the activator the maxillary overjet will also be affected at the same time and equalized by the muscular forces, as described under Group I, with the assistance of the effect of the guided eruption of the side segment teeth.

This type of activator is most valuable and effective in the treatment of deciduous and mixed dentitions, especially during the eruptive periods of the permanent dentitions. Especially when a distal displacement of the mandible exists in conjunction with this group of malocclusions and when the normal occlusal development is interfered with by the incisal overbite, the application of early orthodontic treatment will have a most favorable effect on the development of a normal masticatory mechanism.

The general effect of using this type of activator is shown in Fig. 7. This form of activator treatment will also be illustrated with an actual case.

CASE 2.—Figs. 8 to 11 illustrate the activator treatment according to the above group in the case of a 9-year-old girl who had a very pronounced deep bite. It was possible to reduce the original vertical overbite of 11 mm. to 3 mm. by activator treatment.

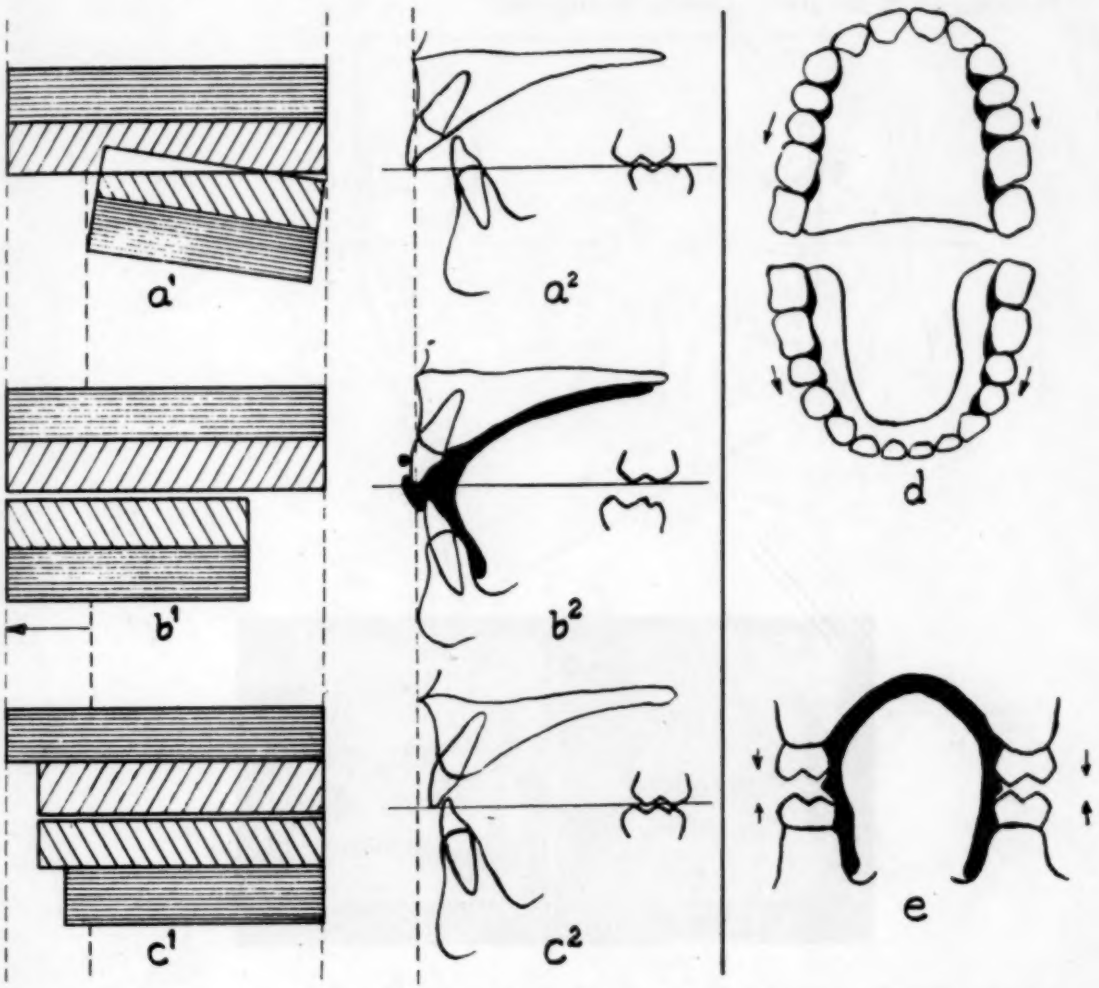

Fig. 7.—Group II. Diagrammatic representation of the activator treatment in cases of maxillary overjet in combination with deep vertical overbite.

The sagittal relationship of the mandible to the maxilla is fairly normal, The difference in basal prognathism being 8°. The dental arches occlude in semidistal occlusion, with a cusp-to-cusp closure at the first molars. Despite the deep bite, the closing movements of the mandible from rest to occlusion, i.e., the path of closure, were not markedly affected by the overbite.

In this case the activator was designed to be active both sagittally and vertically. In order that it should raise the bite the acrylic material between

the occlusal surfaces of the side segment teeth was cut away, thus facilitating guided eruption of these teeth (Fig. 11).

It will be seen from Figs. 9 and 10 that the bite raising effect was achieved by a pronounced increase in the vertical growth of the side segments of the alveolar arches. The frontal alveolar height in both jaws, on the other hand, remains practically unaltered. This implies that the vertical pressure, which falls exclusively on the incisors, has reduced the normal vertical growth of the frontal part at the alveolar arches in this case.

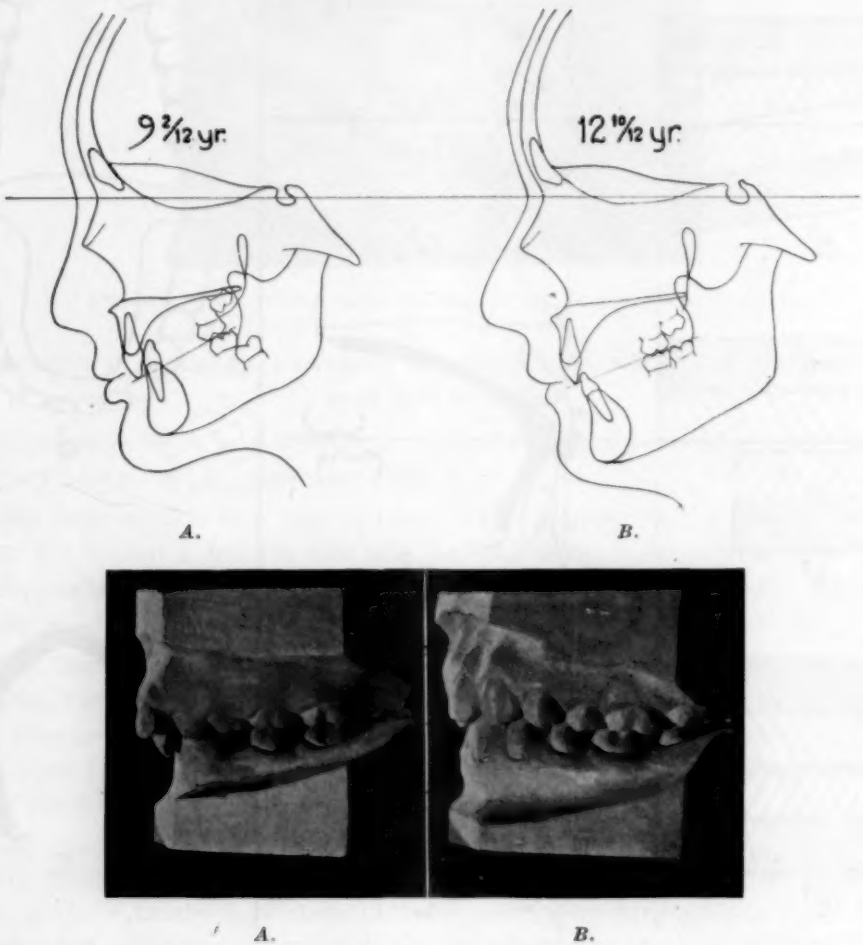

Fig. 8.—Case 2. Activator treatment applied to a 9-year-old girl with extreme deep overbite. *A*, Before treatment; *B*, after treatment.

While it has been possible to achieve normal vertical occlusion in this way, a simultaneous sagittal displacement has occurred in the dental arches, producing normal occlusion in this direction also. A residual irregularity in the frontal portion of the arches was subsequently corrected by means of fixed appliances.

X-ray analysis of the activator treatment reveals that the sagittal relationship between the bases of the maxilla and mandible remains essentially un-

changed (Fig. 9). In the course of the treatment, the facial prognathism, i.e., the basal prognathism, increased in both jaws through normal growth. Thus the basal prognathism increased by 3° in the maxilla and by 2.5° in the mandible, i.e., slightly lesser in the mandible. The forward growth of the whole maxilla is indicated by the more forward position of the pterygomaxillary fissure during this growth period.

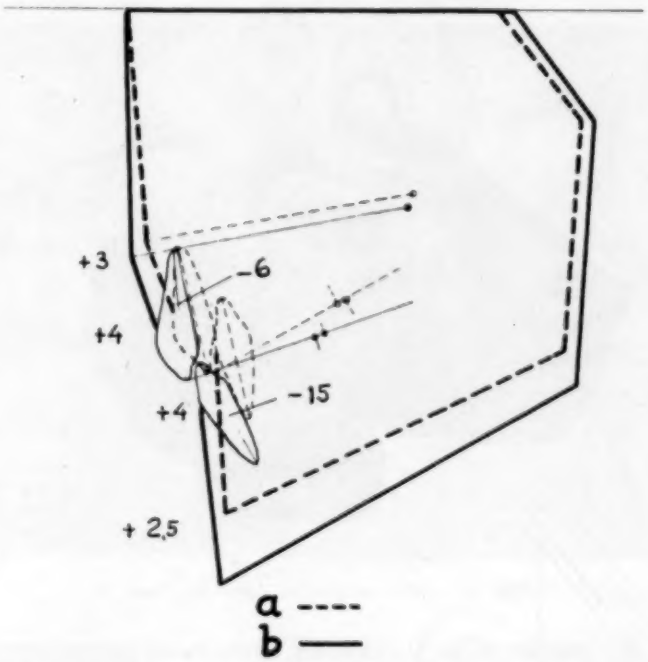

Fig. 9.—Cephalometric x-ray analysis of Case 2, indicating the change in facial pattern and occlusion during the period of treatment. The figure shows the changes in prognathism at the various points in the facial diagram and the changes in the inclination of the incisors, measured from the jaw bases. These differences are expressed in degrees.

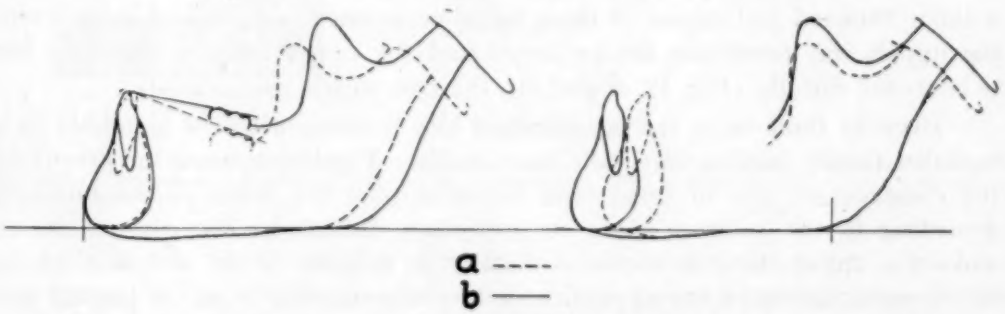

Fig. 10.—Growth changes in the lower jaw in Case 2. The external contours of the lower jaw at the ages of 9 and 12 are shown on the left compared from the chin, and on the right, from the jaw angle.

This means in fact that there has been no total forward displacement of the mandible due to treatment and that the effect of the treatment has mainly been confined to the alveolar arches.

The alveolar arches have increased in prognathism by 4° in both jaws and thus more than the jaw bases. This increase in alveolar prognathism is accompanied by a forward inclination of the incisors by 6° in the maxilla and 15° in the mandible, as measured from their jaw bases.

It may be concluded therefore that as long as the vertical growth of the alveolar arches continues the effect of the activator treatment is beneficial, sagittally as well as vertically.

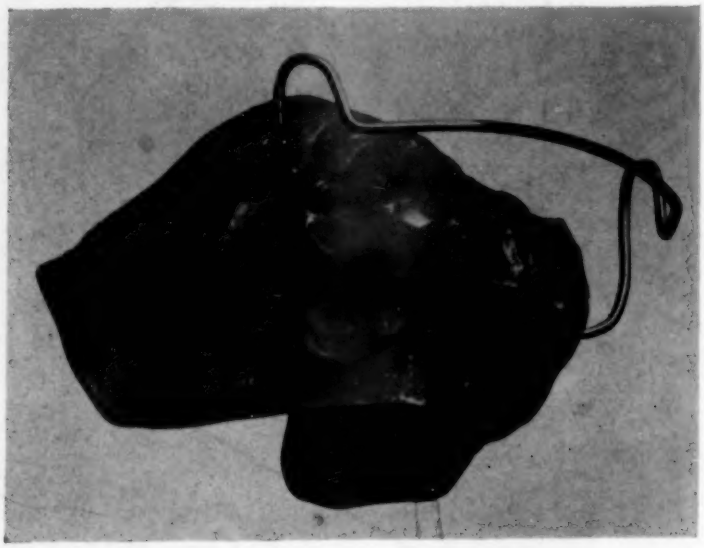

Fig. 11.—The activator used in Case 2.

GROUP III. PRONOUNCED MAXILLARY OVERJET IN COMBINATION WITH SPACING OF THE UPPER INCISORS AND NORMAL OVERBITE (FIG. 12)

In cases where it is necessary to retract the upper anterior segments, for instance in maxillary overjet cases with spacing of the upper incisors with or without forward inclination of these teeth, or in maxillary overjet cases where the upper first premolars are extracted and the upper anterior segments are to be moved distally (Fig. 12, a^1 and a^2), the arch wire is used actively.

Even in these cases the construction bite is taken with the mandible in a mesially forced relationship with the maxilla. Vertical opening in procuring the construction bite in these cases depends upon the depth of the bite and according to the freeway space as previously discussed. Since we desire to move the upper anterior segments distally in relation to the bite as a whole, in the construction of the appliance we free the material from the lingual surfaces of the maxillary anterior teeth including the alveolar portion (Fig. 12, b^2). To facilitate this removal of material, that portion of the appliance is made thicker than those previously described. The material is not removed all at once, but progressively from time to time. Auxiliary springs to the canines may be embedded in the acrylic and freed after processing by a Robinson brush (Fig. 15). The effect of this construction is to exert two forces: the

mechanical force from the activation of the arch wire and the auxiliary springs, and the muscular forces of the mandible returning to its original position at the condyle as the appliance is worn.

The results obtained in this group of cases are principally the retraction of the maxillary anterior segment distally (Fig. 12, c^1 and c^2).

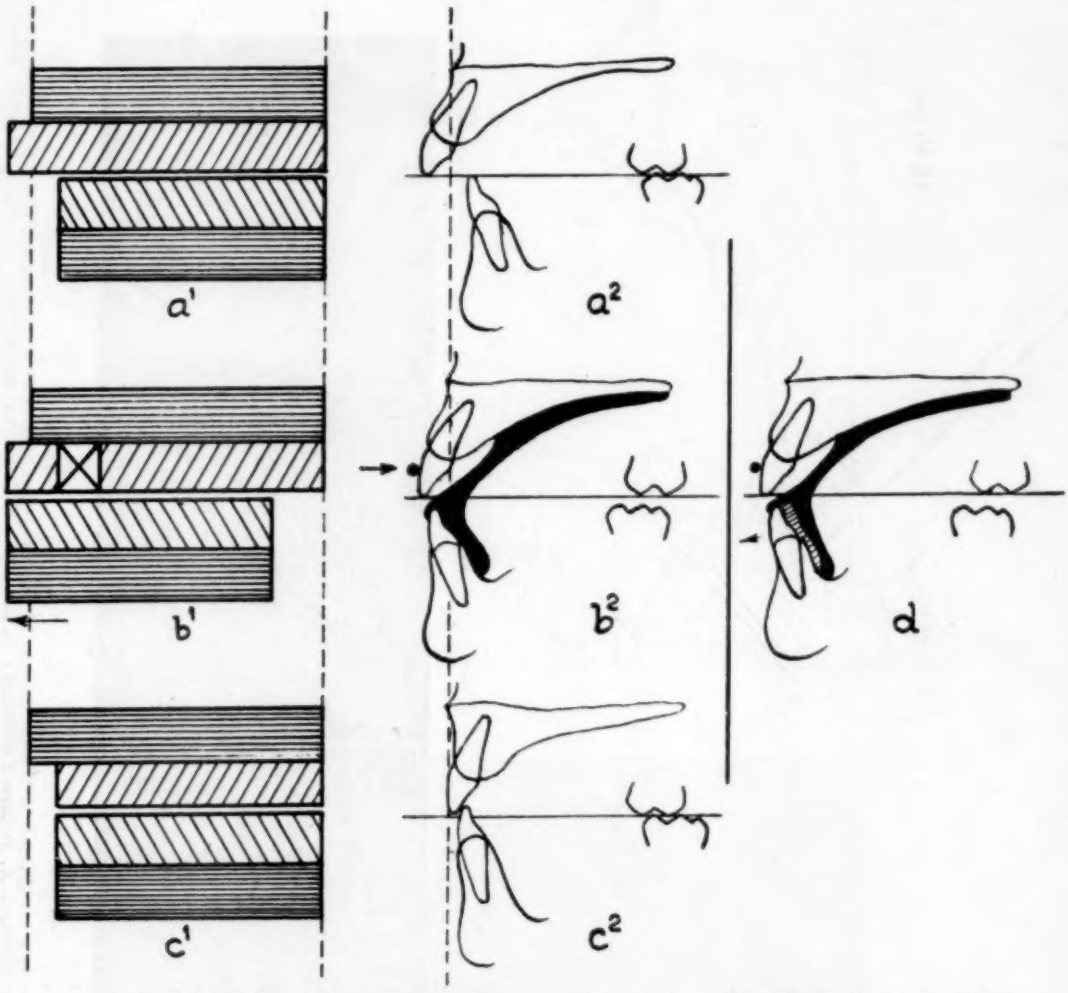

Fig. 12.—Group III. Diagrammatic representation of the activator treatment applied in cases of pronounced maxillary overjet in combination with spacing of the upper incisors and vertical normal overbite.

It may be mentioned that if we desire to alter the arrangement of the lower incisors to a more regular and anterior position this can be accomplished at the same time by placing a gutta-percha lining on the appliance where it contacts the lingual surfaces of the lower anterior teeth and their alveolar process (Fig. 12, *d*). This addition of the gutta-percha will also develop an opening of the bite, which is a more desirable method than the clearing of the occlusal surfaces at the same time as the upper anterior portion is freed, which would result in decreased stability of the appliance. After active treatment, when the activator

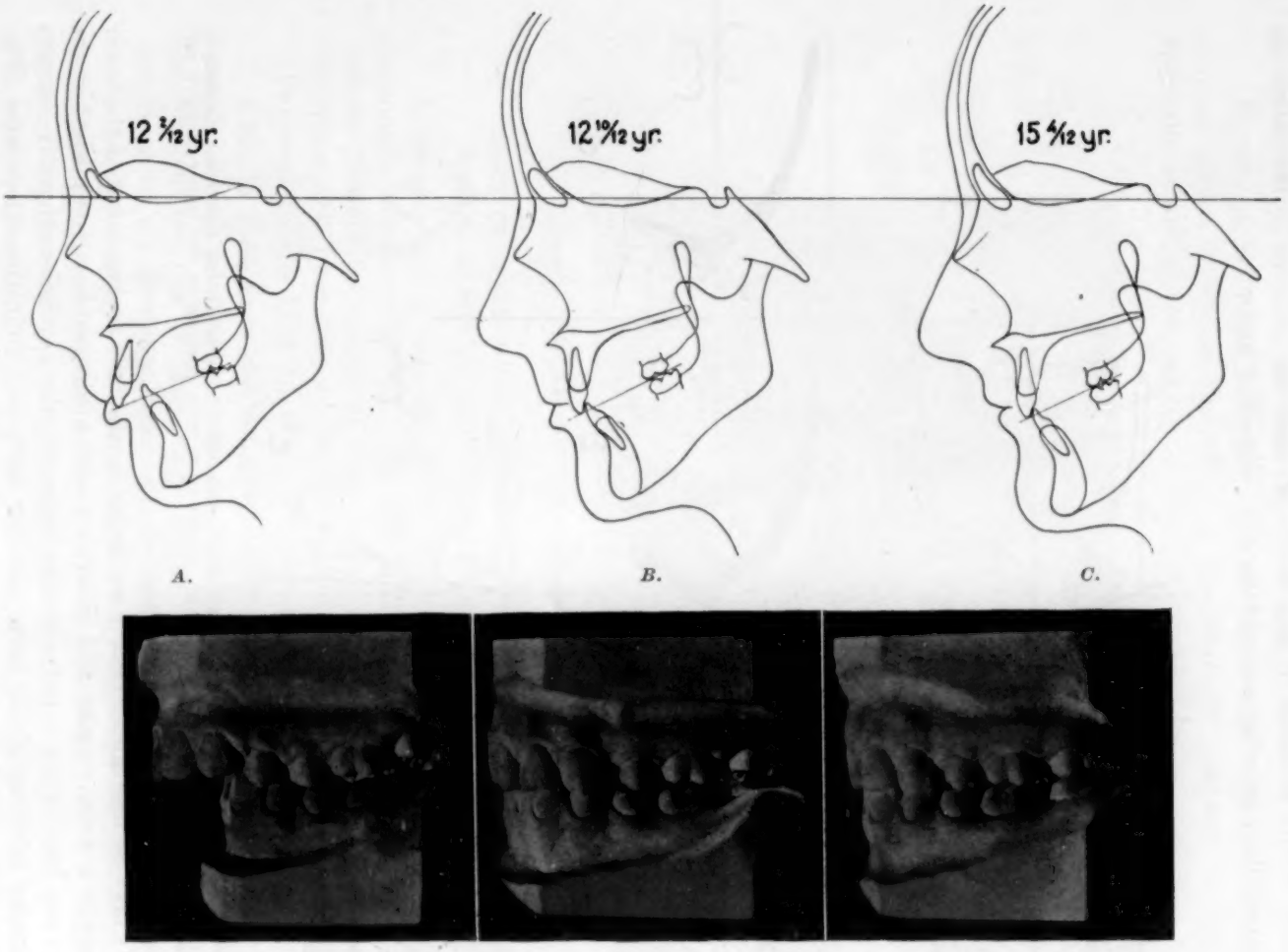

Fig. 13.—Case 3. Activator treatment in the case of a 12-year-old girl with pronounced maxillary overjet, after extraction of both the first premolars. *A*, Before treatment; *B*, after end of active treatment; *C*, after passive treatment.

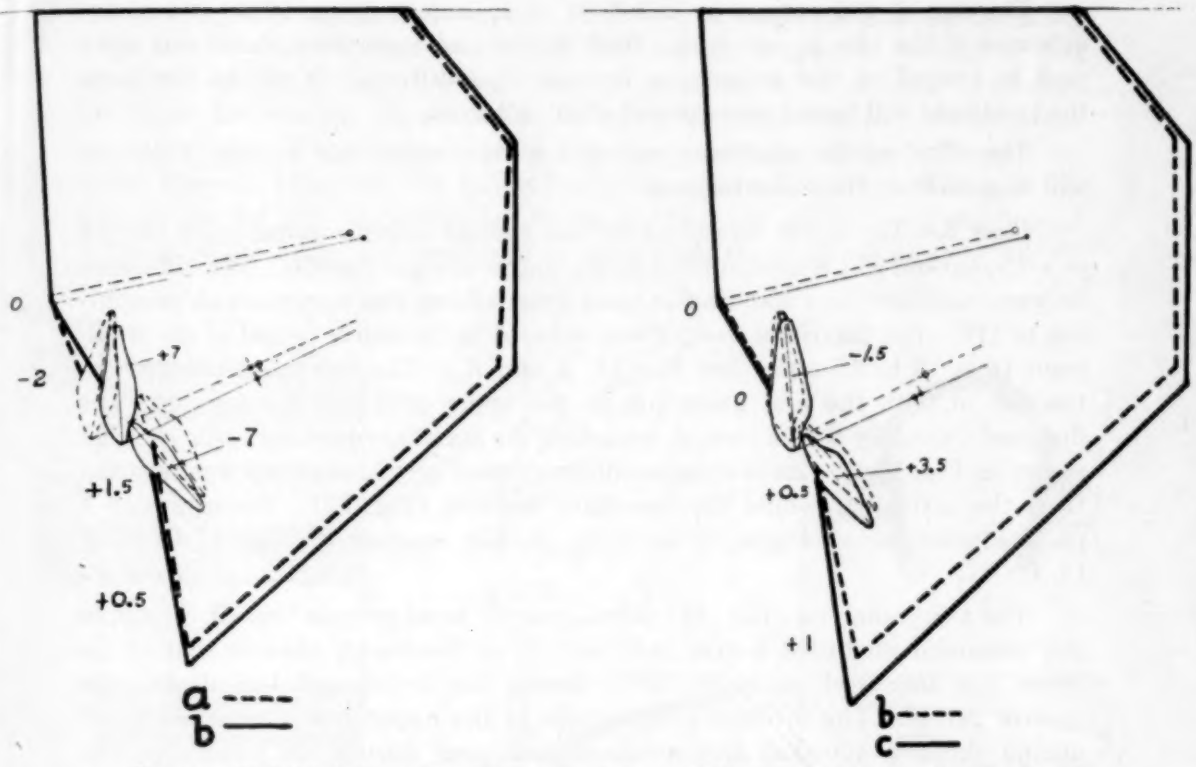

Fig. 14.—Cephalometric x-ray analysis of Case 3, indicating changes in facial pattern and occlusion, on the left during the active treatment period and on the right during the period of passive treatment.

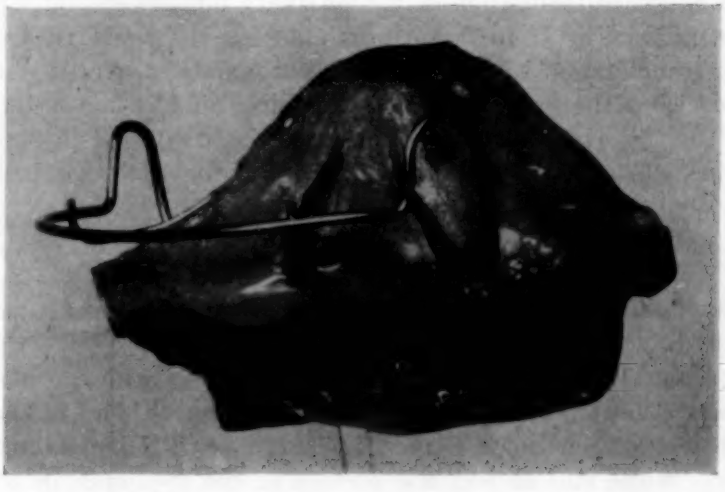

Fig. 15.—The activator used for active treatment of Case 3.

is used passively for retention, the gutta-percha may be replaced by self-curing acrylic.

The age of the patient in this type of treatment is not of too much significance if the bite is not deep. Both mixed and permanent dentitions alike may be treated in this manner, or even adult dentitions. If the bite is deep, the treatment will have a very limited effect in adults.

The effect of the activator treatment in such cases may be very rapid, as will be seen from the following case.

CASE 3.—The active treatment in this case of extreme mandibular overjet in a 12-year-old girl was completed in the course of eight months. The difference between maxillary and mandibular basal prognathism was very marked, amounting to 11°. The maxillary overjet was reduced in the active period of the treatment from 13 to 2.5 mm. (See Fig. 13, *A* and *B*.) The treatment entailed extraction of both the first premolars in the upper jaw, and the activator was designed primarily with a view to retracting the maxillary incisors to the position shown in Fig. 13, *B*. As the treatment progressed acrylic material was removed from the activator, behind the maxillary incisors (Fig. 15). Subsequently a passive activator was applied until the patient reached the age of 15 (Fig. 13, *C*).

The x-ray analysis (Fig. 14) shows that the basal prognathism of the upper jaw remained unaltered during both periods of treatment, whereas that of the lower jaw increased somewhat, 0.5°, during the active and 1.0° during the passive period. The alveolar prognathism of the upper jaw diminished by 2° during the active period and remained unaltered during the passive period, while the lower jaw showed an increase of 1.5° in alveolar prognathism during the active and 0.5° during the passive period. It will be seen that the reduction in maxillary overjet was accomplished by alveolar changes in both jaws, combined with a rearward inclination of the maxillary incisors amounting to 7° and a forward inclination of 7° in the mandible during the active treatment. This change in the inclination of the incisors was partly neutralized during the passive period when the forward inclination increased 1.5° in the upper and decreased 3.5° in the lower jaw. The effect of the treatment is limited to the alveolar arches. The relative position of the jaws, on the other hand, has not undergone any measurable change due to treatment.

GROUP IV. MANDIBULAR OVERJET (FIG. 16)

In cases of mandibular overjet (Fig. 16, a^1 and a^2) the activator is constructed in a different manner. The construction bite is taken with the mandible in its forcefully retruded position and if possible with the incisors in an edge-to-edge relationship (Fig. 16, b^1 and b^2). The arch wire in these cases is formed so that it extends down to the labial surfaces of the mandibular incisors (Fig. 16, *e*). While still in wax the portion of the appliance in contact with the lingual surfaces of the mandibular incisors and their alveolar process is entirely removed, leaving only the lateral segments of the activator in the lower arch (Fig. 16, b^2 and *d*).

In the Group IV cases we can avail ourselves of three separate effects, mechanical with the arch wire, muscular with the mandible returning to its original position, and guided eruption, if desired in deep bite cases, by trimming away the material between the occlusal surfaces in the opposite manner to that described for the Group II cases. Also the arrangement and labial version of the upper incisors may be controlled by lining the appliance with gutta-percha where it contacts the lingual surfaces of the maxillary incisors and their alveolar process (Fig. 16, b^2). Instead of gutta-percha some type of small adjustable spring may be constructed in the appliance in contact with the lingual surfaces of the upper anterior teeth to accomplish the same result (Fig. 16, *f*).

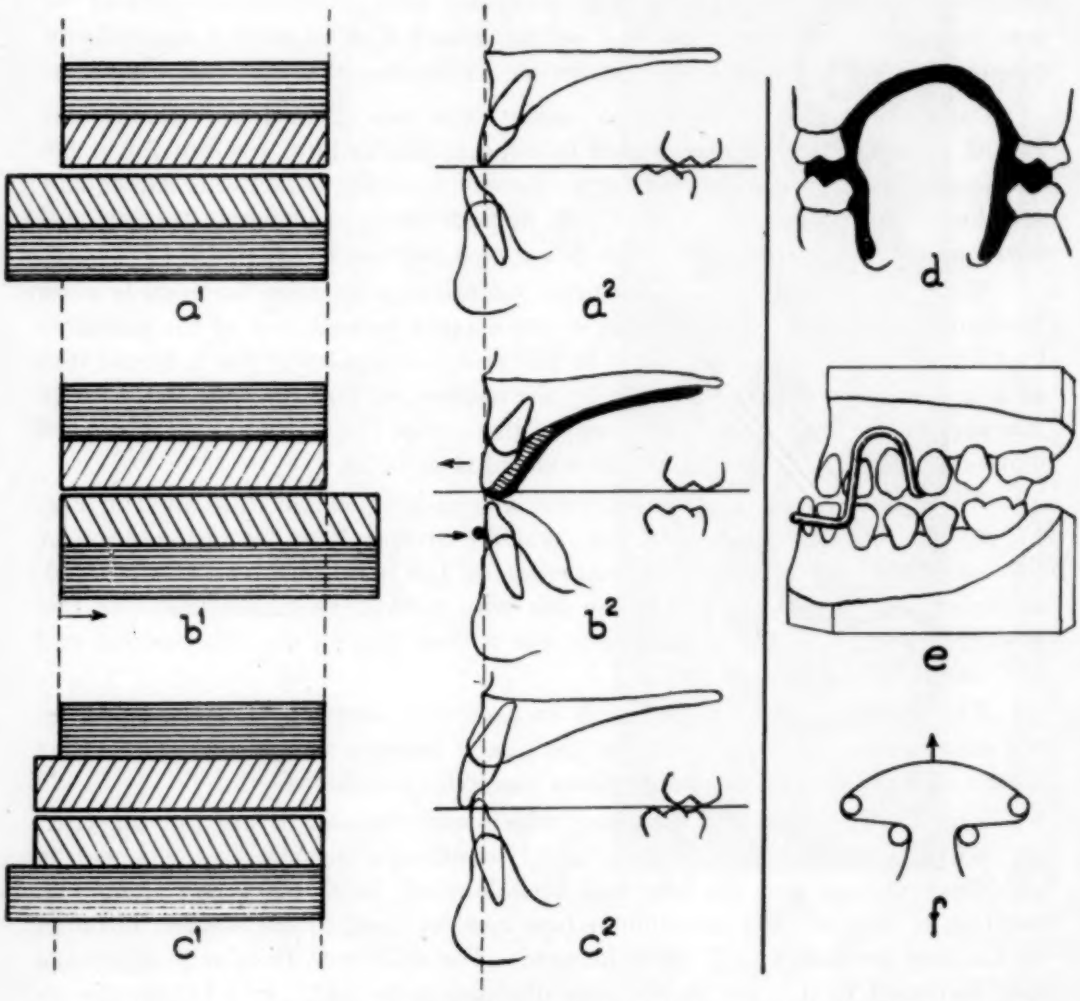

Fig. 16.—Group IV. Diagrammatic representation of the activator treatment applied in cases of mandibular overjet.

It is possible, when necessary to obtain advantageous effects in the deciduous dentition with this type of therapy. However, the maximum results will be obtained in a mixed dentition where we can take advantage of the

eruption of the teeth. Even in permanent dentitions and in adult cases, favorable effects may be accomplished.

The possibility of effecting orthodontic treatment in cases of mandibular overjet will naturally depend primarily on the facial growth pattern of the individual in question, i.e., on whether or not the difference in basal prognathism will increase during the growth period. It is evidently not feasible to bring about any appreciable change in the growth of the jaws, but by utilizing the possibility of reshaping the alveolar arches during their vertical growth in conjunction with a raising of the bite, a marked change in the occlusion can be achieved. The effect will naturally be greater in the case of a dentition still subject to growth than in the fully developed bite. Nevertheless, it may be possible to affect the occlusion to a certain extent even in adults, especially in conjunction with prosthetic reconstruction, as illustrated by the following case.

CASE 4.—A 27-year-old female patient, who was afflicted with mandibular overjet combined with a pronounced forced mandibular bite, was sent for orthodontic treatment by a colleague, Dr. O. Boberg, in order to facilitate subsequent prosthetic reconstruction. Fig. 17, *A* depicts the cephalometric tracing and model of the bite with the mandible in a forced position to full closure.

With the jaws relaxed the sagittal relationship between the jaws is more favorable, as the basal prognathism of the maxilla exceeds that of the mandible by 1.5°. When the jaws are closed in full occlusion the lower jaw is forced into an abnormally protruding position by the incisors, so that the base of the lower jaw projects 3° beyond that of the upper jaw. (See Fig. 17, *A*; i.e., the forward movement of the mandible in occlusion amounts to 4.5°.)

An activator was constructed, with jaws in the position illustrated in Fig. 17, *B*. The bite was opened 10 mm., which corresponds to the rest position of the lower jaw. A simultaneous retraction of the lower jaw was also effected, to the extreme dorsal position of the jaw joint so that the incisors met. In this position the mandibular prognathism was 2° less than in the rest position and 6.5° less than in occlusion.

The activator was designed with an arch wire exerting an inward pull on the mandibular incisors, while the maxillary incisors were at the same time thrust outward by a gutta-percha insert placed behind these teeth.

Fig. 18 illustrates the activator, which was retained in use for one year. By the end of this period the original mandibular overjet had changed to maxillary overjet and the bite had been lowered, from the construction bite position by 3 mm. The mandibular base had returned to the position initiated by the rest position, i.e., 2° more forward. The maxillary alveolar prognathism had increased by 1°; the mandibular diminished by 1.5°. In addition the inclination of the incisors had increased outward by 9° in the upper while the lower incisors were tilted inward by 6°.

Hence the difference in alveolar prognathism has diminished while the inclination of the incisors has also altered. These changes have had the desired effect and facilitated the prosthetic treatment.

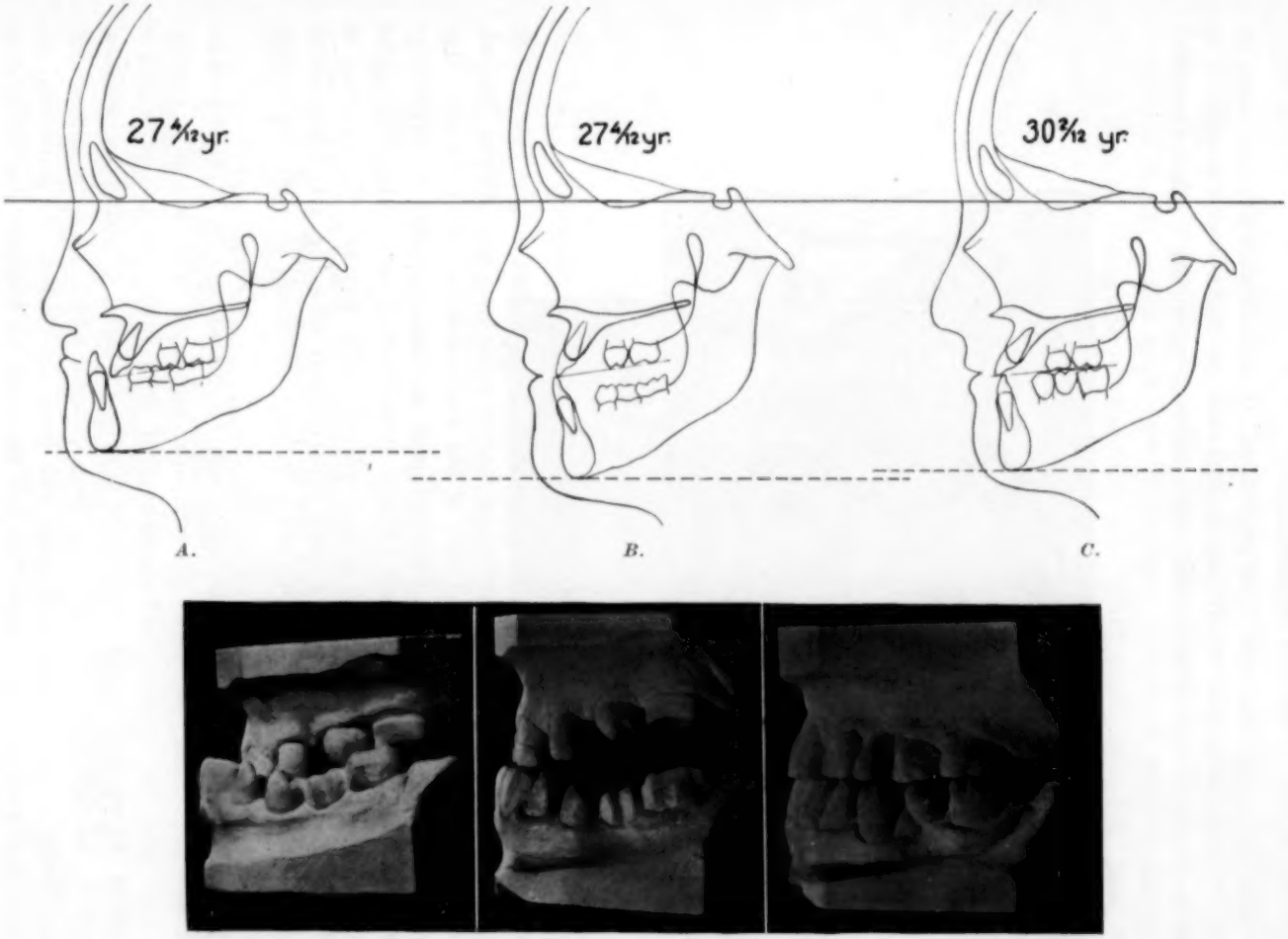

Fig. 17.—Case 4. Treatment of mandibular overjet in adult female. *A*, Before treatment, with jaws in full closure; *B*, before treatment, with the lower jaw forced posteriorly and opened to rest position, indicating the jaw position for activator construction; *C*, after one year activator treatment and two years after insertion of fixed bridgework.

Fixed bridgework was then constructed with the jaw in this position, corresponding to a 6 mm. raising of the bite from the original occlusal position. Fig. 17, *C* shows the ultimate reconstruction of the bite two years later, during which period the jaw position was unchanged.

It may be noted that activator treatment of mandibular overjet cases in the mixed dentition period where vertical growth of the alveolar arches is in progress enables the bite to be raised, when necessary, similar to that described in Group II.

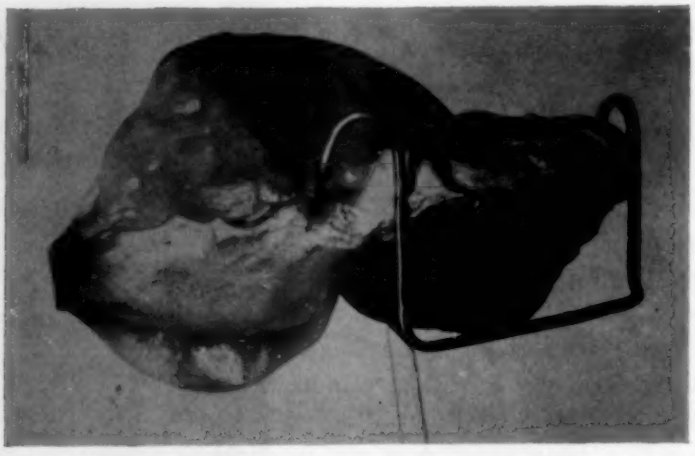

Fig. 18.—The activator used in Case 4.

GROUP V. TRANSVERSE OR LATERAL MALOCCLUSIONS

In this group of cases there are so many variations that only a few will be briefly discussed here. If an expansion of both maxilla and mandible is desired, a small precision screw may be included in the wax construction of the activator at the midline. After processing, the appliance is literally sawed in half except for the screw, half of which remains firmly imbedded in each side. The same effect may be obtained by the use of a so-called Coffin spring. This spring is also placed in the midline in the wax construction and the activator sawed through the anteroposterior midline later after processing, so that the spring may be expanded.

Although the Coffin spring device is neater, the expansion screw provides greater stability. Fig. 19 shows an activator equipped with a Coffin spring, which was used for symmetrical expansion of both jaws. If the activator is designed as shown in Fig. 11, where the acrylic material covering the occlusal surfaces of the side segment teeth has been ground away, an intermittent expanding wedge action is obtained when the jaws are closed. If unilateral expansion is indicated in one or the other jaw this may be accomplished by adding a lining of gutta-percha to the surface of the appliance to that segment in which expansion is desired. The gutta-percha may be substituted by small springs.

If the mandible as a whole is displaced transversally, the construction bite for the activator should be made to the objective normal, reducing the transversal displacement, after removal of cusp interference if present. In ex-

pansion of the arches this method may be used in both the deciduous and the mixed dentitions. In permanent dentition it may be used for correcting transversal displacement of the mandible, but the effect of expansion is limited in this case.

The activator method does not constitute any simple mode of treatment. Nevertheless, this form of treatment offers certain advantages, which have brought it into fairly wide use in Europe. Activator treatment may also be used with advantage in conjunction with other appliances, e.g., headcap treatment.

The activator is used nocturnally, but it should also be used at least for one waking hour at any convenient time during the day.

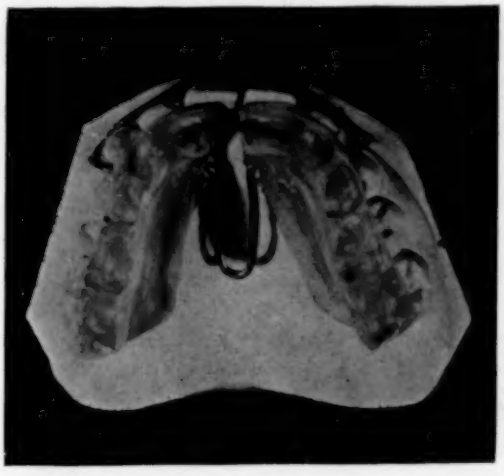

Fig. 19.—Expansion treatment employing an activator equipped with a Coffin spring.

Some of the advantages derived from the use of the Andresen activator may be listed:

1. Treatment may be started early (deciduous or mixed dentition).
2. Less frequent appointments are necessary for adjustments (two-month intervals or more).
3. Injury to the tissues is negligible.
4. No impairment of esthetics during the day since the appliance is used nocturnally.
5. Therapy for thumb-sucking.
6. Will educate to nose breathing instead of mouth breathing.
7. Less conducive to caries incidence.

Some of the disadvantages are listed below:

1. Impossible to use with a patient who will not cooperate.
2. Greater selectivity of cases is necessary than with fixed appliances.
3. Age is a factor in some types of treatment which will prevent the use of the activator.
4. If crowding is of marked degree the use of the activator is limited.

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Editorial

The Fiftieth Anniversary of the American Association of Orthodontists

THE fiftieth anniversary of the American Association of Orthodontists was commemorated in Louisville, Ky., on April 23, 24, 25, and 26, 1951. Many did not realize that fifty years had passed since a handful of workers, headed by Dr. Edward H. Angle, met at the Jefferson Hotel in St. Louis, Mo., in 1901 and organized the American Society of Orthodontists. Dr. Edward H. Angle was elected the first president, and Milton I. Wistson, of Detroit, the secretary.

Certainly that original group had no idea that 800 people would assemble in Louisville in 1951 to celebrate the fiftieth anniversary of the organization.

Under the leadership of Joseph E. Johnson and his energetic committees, the meeting got under way on Monday, April 23, and the Program Committee conducted a program on research, under the leadership of Wendell L. Wylie, Chairman, Robert E. Moyers, and J. A. Salzmann, New York City.

An interesting program of events, which included a beautiful scenic ride through the traditional Blue Grass Country of Kentucky, was arranged for the ladies.

The stag party was held on Monday night, with President Joe Johnson as master of ceremonies, and Mr. Ed. Dougherty, President of the Louisville Baseball Club, as the principal speaker. At the head table were seated the officers of the American Association of Orthodontists and committee members of the current meeting, Bernard deVries, President-Elect, Homer Robison, Vice-President, Brooks Bell, Wallace Standard, Joseph Selden, John Atkins, and Bert Coomer.

With John Richmond as master of ceremonies, the feature of the International Luncheon was the address by Dr. Elmer Henderson, President of the American Medical Association. Dr. Henderson outlined the present status of socialized medicine in America, and pointed out that socialized medicine is the first big wedge to open general Socialism. He pointed out that even at this time 300,000 Americans enjoy some kind of health insurance and that the A. M. A. predicts that within three years that figure will rise to about 90,000,000 people, within the United States of America.

The principal address of the Past-President's Luncheon was made by the 1951 Ketcham Award recipient, Past-President Benno E. Lischer, of St. Louis, Mo. Dr. Lischer dwelt at length upon the development of orthodontics as a science and art during the first fifty years of its history. The Past-Presidents' Luncheon, with Max Ernst as master of ceremonies, reflected much more of a serious atmosphere and trend than in past meetings. Opinions were

expressed and speculation was indulged in as to both the past and the future of dentistry's first specialty. An over-all impression was gained from the remarks of Dr. Lischer and leaders of the specialty and that is that all are proud of the record of orthodontics, but that its position as a health service must be expanded far beyond its present capacity for the public good, and that there must be more standardization and agreement upon the subject of orthodontic education.

No doubt the high spot of the entertainment program was the reception honoring President and Mrs. Joseph E. Johnson.

To get into the program proper, the Research Program was held on Monday morning, and this will be listed elsewhere in this issue of the JOURNAL. This program is quite extensive and reflects wide interest in all departments of orthodontic progress, education, and the rapid advance now in progress.

Tuesday morning, after invocation by Rev. Thomas M. Giltner and the address of welcome by Robert P. Thomas, Trustee of the American Dental Association, was the response by President-Elect Bernard G. deVries.

President Joseph E. Johnson then presented the President's address. Next came a symposium on functional malocclusion in orthodontics by Blair C. Madsen and Elam Harris: (1) "The Diagnosis and Correction of Functional Malocclusion," by Blair C. Madsen; (2) "The Effect of Functional Malocclusion on the Temporomandibular Articulation and Related Structures," by Elam Harris, Louisville, Ky. This was followed by "Practical Summary of the Routine Use of Bolton Roentgenography During the Past Twenty-five Years," by B. Holly Broadbent, of Cleveland, Ohio.

Tuesday P.M. was devoted to general clinics and these will be listed separately in this issue of the JOURNAL.

Wednesday morning opened with the former president, Leuman M. Waugh, of New York, speaking on the subject of "The American Association of Orthodontists—the First Half Century." This was followed by a talk, "A Typical View of European Orthodontics," by J. A. C. Duyzings, of Utrecht, Holland.

Then followed the presentation of the Albert H. Ketcham Award to Benno E. Lischer by Joseph D. Eby on behalf of the American Board of Orthodontics. This was followed by "A Serial Study of Good Occlusion From Birth to 12 Years of Age," by John H. Sillman, of New York City.

Wednesday opened with the subject of "Catalyst in Growth Research—T. Wingate Todd," by Wilton M. Krogman of the University of Pennsylvania.

J. A. Salzmann and George Moore, representatives of the American Association of Orthodontists, attending the Midcentury White House Conference in the interest of orthodontics as a health measure, then made an interesting report.

"The Development of the Edgewise Arch Mechanism and Its Place in Contemporary Orthodontics" was presented by G. H. Terwilliger, Oakland, Calif.

On Thursday P.M. the following order of the program was presented:

A Presentation on Habits. Kyrle W. Preis, Baltimore, Md., and Clifford L. Whitman, Hackensack, N. J.

A Motion Picture Study of Childhood Habits Which Affect Dental Occlusion and Facial Development. Kyrle W. Preis, Baltimore, Md.

Habits Can Mean Trouble. Clifford L. Whitman, Hackensack, N. J.

Prevention and Control of Dental Caries as Related to Orthodontics. Gerald J. Cox, Pittsburgh, Pa.

A System of Treatment With the Universal Appliance. Lieutenant Colonel William H. Day, Dental Corps, Washington, D. C.

Orthodontic Case Analysis and Diagnosis. C. W. Carey, Palo Alto, Calif., William B. Downs, Aurora, Ill., and Ashley E. Howes, New Rochelle, N. Y.

An innovation in this year's program was the publication of the biography of each of the essayists in the order of their appearance on the program. This gesture added so much interest to the essayists that the JOURNAL will publish this feature in the current issue, and will continue to do so as long as this excellent idea is continued in the future.

The local committees, working like Trojans, were handicapped this year, due to the fact that such a small percentage of the membership answered and sent in the routine questionnaire in advance of the meeting. This questionnaire system, in which the visitor advises the local committees what part of the entertainment program he and his wife wish to enjoy, is traditional in the American Association of Orthodontists and has always been regarded as a great success. Those who have the 1952 meeting in charge have admonished that questionnaires, with check, be sent in far in advance, or the committees will be put to great disadvantage in their efforts to entertain the guests.

Next year, mail your *questionnaires* far in advance of the meeting to be held in *St. Louis, Mo.*, in April.

The result of the election of officers was as follows:

Bernard G. deVries, President,
705 Medical Arts Bldg.,
Minneapolis, Minn.
Brooks Bell, President-Elect,
4150 Mockingbird Lane,
Dallas, Texas.
Malcolm R. Chipman, Vice-President,
1251 Medical Dental Bldg.,
Spokane, Wash.
George R. Moore, Secretary-Treasurer,
919 Oakland Ave.,
Ann Arbor, Mich.

Reports

REPORT ON PRESIDENT'S ADDRESS, PACIFIC COAST SOCIETY OF ORTHODONTISTS

THIS committee has been appointed to review the address given to the Pacific Coast Society of Orthodontists by its President, C. F. Stenson Dillon, at the twenty-second biennial meeting. In this report, we wish to review the salient points brought out in his address and to make recommendations toward carrying out these ideas.

We recommend that this address be published in the JOURNAL and suggest that each and every member read and study it at his leisure. There is much food for thought in its pages. Also running through the address is a picture of the man. In it we can feel his great loyalty to his profession and his fidelity to the interests of his patients. All this is expressed, not only in a serious vein but also in the dry wit and humor which goes so much to show the character of Dillon, the man.

The stature of any leader of men is gauged, not only in the way he carries out his own assignments but also in his selection of capable men to carry to completion the duties given them. Dr. Dillon saw the need for a new constitution and bylaws for our Society. We are especially fortunate in his selection of a committee for this work. We feel that they have given us a masterpiece in this constitution and bylaws that should guide our Society for a long, long time. Congratulations to Don MacEwan, Arnold Stoller, George Barker, and Harvey Stryker for a job well done.

The problem of stimulating the interest of the younger members of our Society into taking a greater part in the activities of our Society may not be as difficult as it at first seems. The material is there. That we know. We feel sure that all that is needed is to assign the duties to them and that they will be only too glad to step in and shoulder their share of the responsibilities of the Society. We recommend that the officers of the Pacific Coast Society of Orthodontists and its three sectors keep this point in mind when making appointments to committees and also in the formulation of the programs for our meetings.

Now we come to the section of Dr. Dillon's paper which we wish to emphasize especially. That is the formulation of an active and authoritative necrology committee. We feel that at no time can we be of greater service to our fellow member than at the time of his passing to the Great Beyond. His loved ones and his patients are left without his guiding hand. Confusion reigns in his office. This has been considered before, but like Mark Twain's reference to the weather, "No one ever does anything about it." We hope that this time our incoming President and the Board of Directors will follow through on Dr. Dillon's recommendations.

BEN L. REESE,
WILLIAM P. MCGOVERN,
ERNEST L. JOHNSON, CHAIRMAN.

Department of Orthodontic Abstracts and Reviews

Edited by
Dr. J. A. Salzmann, New York City

All communications concerning further information about abstracted material and the acceptance of articles or books for consideration in this department should be addressed to Dr. J. A. Salzmann, 654 Madison Avenue, New York City

An Investigation Into the Removal of the Four First Permanent Molars: By J. Hutchinson Glen, L.D.S. (Eng.), Brit. D. J. **89**: 39-42, July, 1950.

While the controversy over the results of the removal of the four six-year molars was raging in the dental press in 1940-1941, the children in the care of the writer's former employing authority began to return from their first evacuation. Many had lived in country districts and had received little dental treatment during their stay; in consequence the six-year molars were often unsavable. It was thought that such a state of affairs might profitably be used as the material of a controlled investigation, the purpose of which would be to remove the four six-year molars and observe the results obtained under the following headings:

1. Variations in the incidence of caries.
2. The tilting, rotation, and spacing of adjacent teeth with the resultant loss of occlusal contacts.
3. The effect on the vertical height (overbite) and parodontal condition.
4. Last, and perhaps most naively, to determine by clinical signs, a stage of development in the arches, when these teeth could be removed with consistently good results. This was necessary if the policy of their removal was to be recommended as a result of the findings of the investigation, because the conditions for successful treatment advocated by A. A. Wilkinson are impractical for the majority of children seen in school clinics, few of whom retain all of their deciduous teeth until the age of 8 years.

The investigation was started with 109 children, of both sexes, aged between 9½ and 10½ years. Unfortunately for one reason or another this number became reduced to 77 children, 5½ to 6 years afterward when the variation in the incidence of caries was worked out and compared with the incidence of caries figure in an equal number of children of the same age who had not lost their first permanent molars. The 15½ and 16 years of age group was chosen for the final evaluation of the incidence of caries figures, not only because it allowed a reasonable period of time to elapse during which the teeth might decay, but also because the school population in that age group is relatively small; in consequence the choice of an identical number of children as a control, or alternatively, the examination of all children of that age was made much easier and less selective. The first permanent molar teeth were not included in the evaluation of the incidence of caries in the children of the control group.

The children in the experimental group were examined annually; those of the control group were examined and the results added when the final evaluations were made.

Children whose clinic record cards gave an incomplete dental history were not included in the control group.

1. *The Caries Incidence Figures.*—The method of assessing the extent of the decay present in the teeth was the one described by Mellanby and associates in 1936. "Tempryte" probes Nos. 17 and 11 were used.

The evaluation of the caries data was done by the system of "score points" suggested by Whyte from whose article the phrases "Average Caries Figures" (A.C.F.) and "Total Caries Figures" (T.C.F.) have been obtained. The only alteration that was made to his procedure was that all the fully erupted teeth present at the time of the evaluation were included in the investigation, and not only those which were in complete maxillomandibular occlusion. This was thought to be necessary because the oral conditions relative to the partial loss of occlusion in the experimental group had been artificially created, and were in themselves part of the subject of the investigation.

2. *Tilting and Rotation.*—The tilting, rotation, and spacing of the adjacent teeth, with the loss of occlusal contact, were assessed visually and radiographically. As no instruments were available for accurate measurements, no record was kept of the possible loss of anteroposterior length of the alveolus.

(a) Loss of occlusal contact: The method employed in the evaluation of the loss of occlusal surfaces, and arriving at an "average occlusal figure" for each group, was similar to the one employed for the evaluation of the incidence of caries. The occlusion was assessed by visualizing the teeth diagrammatically in one plane as consisting of a buccal surface which was made up of two or more planes arranged as triangles, which would interdigitate with those of the opponent teeth in the opposite jaw. In this manner the premolars were considered to have two occlusal planes and the molars four. "Points" were awarded so that a summation of the mouth could be made.

An example of the method would be that an instanding second premolar would represent the loss of two occlusal planes. A rotated premolar might be said to have lost one or two planes according to the degree of rotation.

If somewhat primitive, this method did provide a means of comparing the degree of occlusion in both groups of children. The "average" occlusal figure was arrived at by dividing the total number of "points" awarded in each mouth by the total number of the "cheek" teeth examined. The canine teeth were not included as "cheek" teeth; in consequence, the first mandibular premolar was considered to have one occlusal plane. In the summation the first permanent molars were included in the number of teeth examined in the control group. Unfortunately, a dynamometer was not available to compare the occlusal force, but Friel stated that he had found that a substantial reduction in efficiency follows the removal of the first permanent molar.

(b) Observations on the findings: in the control group, the loss of occlusal surfaces was largely due to the displacement of the cheek teeth from the arch through the lack of anteroposterior alveolar length. The displacement of the second premolar sometimes allowed the first permanent molar to tilt slightly and rotate, with further loss of occlusal surfaces. Altogether 121 cheek teeth were displaced, representing 0.1 per cent of the teeth examined. In addition 47 upper and lower canine teeth were displaced buccally, approximately 0.18 per cent of the total number of canine teeth examined.

Imbrication of the upper incisors, which may or may not have been due to the encroachment of the cheek teeth into the incisal segment, occurred in 0.07 per cent of incisors inspected.

In the experimental group, the chief cause of the loss of occlusal surfaces was the tilting of the second permanent molar and the rotation of the second premolar. Only one case of buccal impaction of the upper canines was seen. Imbrication of the upper incisors occurred in 0.012 per cent of the incisors inspected. This was substantially less than those found in the control group. It is often stated that the tilting of the second mandibular molar is caused by that tooth falling forward into the socket of the first permanent molar. But a similar condition is not met with in the maxilla to the same degree. It ap-

peared that there were at least two other possible causes of the condition. It was found that in those cases where the tilting was very great (in one case the mandibular tooth was at about 80° to the occlusal plane) the deciduous molars had been extracted early in life and the first permanent molar was removed while the second molar was but only slightly erupted. This large space allowed the tongue to bulge over the alveolus, literally holding down the mesial cusps of the second molar and depressing the crown backwards, allowing the interproximal spacing of the cheek teeth to become very marked. Where the tilting was of lesser degree, the cause may have been the extraction of the first permanent molar which had altered the sequence or timing of the eruption and movement into occlusion of the second molars. In such cases the distal cusps of the maxillary molar were found impinging on the mesial cusps of the mandibular molar, suggesting that the maxillary tooth had moved forward along its shorter arc before the mandibular molar was ready for it in its forward position. The same degree of interproximal spacing was not found, possibly because some of the deciduous molars had been retained in these cases, or others replaced by their permanent predecessors before the extraction of the first permanent molars. If the deciduous molars are lost prematurely, the loss of their influence on the growth of the anteroposterior length of the alveolar segments must have an influence on the relative positions of the second permanent molars, but it is difficult to believe that, in those cases where they are present in full complement, the removal of the first permanent molar will, per se, cause a tilting of the second molars.

3. *The Loss in Vertical Height.*—It was not found that there was any increase in the overbite among the children in the experimental group. Only one case was recorded where the incisal overlap was greater than the normal incisal third. In contrast six children in the control group had an incisal overlap greater than the incisal half.

The Parodontal Condition.—The gingival condition of the experimental group was assessed before the extractions. Children with marked gingivitis were those with nondetergent mouths, with nasal stenosis, "wrong swallow," or both. Local gingivitis due to loose deciduous teeth was discounted. Eleven children were considered to have had parodontal trouble before the extractions were done.

When the final assessment was taken, two children in the experimental group had localized gingivitis, and none had evidence of traumatic gingivitis due to the extractions. In the control group, 16 children had gingivitis of the mandibular and maxillary incisor teeth, apparently due to the imbrication because only two cases had nasal stenosis and four a "wrong swallow." Twelve others had localized gingivitis in the premolar regions distal to outstanding canines. Generally the oral condition of the experimental was superior to that of the control group.

4. *Clinical Age.*—It soon became obvious, as the children of the experimental group were periodically examined during the course of the investigation, that because such clinical signs as could be looked for are very largely problems of eruption, there is no age determinable by such signs which could be said to be that at which the four first molars could be removed with consistently good results. Unfortunately few developmental cycles are more variable. The suggestion has been made that the best age can be said to be when the first premolars are erupted and in occlusion. It was impossible to verify this because frequently one or more of the second premolars had erupted before the first premolar, and in a few cases the second molar had erupted before either of them. Such variation in the only clinical signs available obviously makes it impossible to recommend a dental age at which the teeth can be removed safely and with consistently good results. Moreover, as

the years passed, it became more and more apparent that it was impossible to leave the teeth to move into good occlusion on their own without any help from an orthodontic appliance. A workable occlusion occurred in the majority of the cases treated; it is debatable whether the adult parodontal condition may not prove to be as poor as that commonly found in an overcrowded mouth.

SUMMARY

The findings of the result of an investigation into the removal of the four six-year molars bear out the statement that there is a reduction in the incidence of decay and that the general parodontal condition is improved. The loss of occlusal contact, and the variable and unpredicable movement of the teeth without control by an appliance, make it impossible to recommend removal of these teeth as a routine in an attempt to produce thereby the perfect dentition. A further factor against such a course of treatment, without the strictest safeguards and control, such as those advised by Wilkinson in his original article, is the frequency with which one or more teeth may be missing from the dentition. During the study of the bite-wing films taken for the assessment of occlusal contact, the prevalence of cases in which one or more of the second premolars were absent was noticed. In consequence an examination of nearly 400 films, taken for orthodontic purposes, was made. Of these, 12.4 per cent showed that one or more of the second premolars were absent. When these figures were reassessed in relation to the number of children of the same age groups in the district, the percentage figure became 5.4. If this percentage of the child population is already one or more teeth short of the full complement, it would appear to be unwise to advise the removal of the four first permanent molars as a routine, particularly as the third molars and upper lateral incisors are also frequently absent. The removal of these teeth is too often essential in the course of routine clinic treatment, and more harm is caused by the failure to remove the opposing teeth than by extracting all four, but it is advisable to consider their removal when this is essential, as part of an over-all orthodontic plan, and to guide the remaining teeth into position with an appliance rather than to consider their extraction to be a complete treatment in itself.

The Dental Picture of Spontaneous Parathyroid Insufficiency: By Stanley A. Lovestedt, D.D.S., Rochester, Minn., *Oral Surg. Oral Med., and Oral Path.* **3**: 396-402, March, 1950.

There are three types of hypoparathyroidism. The parathyroid glands are occasionally removed during thyroidectomy. In such postoperative hypoparathyroidism, the dentition would not be affected if the dental development were completed prior to the operation for goiter. Since most thyroid disease treated surgically is in adults, postoperative parathyroid insufficiency would not be expected to involve the teeth.

In the case of neonatal hypoparathyroidism, a condition occasionally existing at birth because of the mother's compensatory hyperparathyroidism and which is usually corrected by the development of the infant's own parathyroid glands shortly after birth, the transient hypocalcemia, if severe enough and if it persists long enough, may be recorded in the enamel of the teeth.

The idiopathic type of hypoparathyroidism is the third type and is of unknown origin. The symptoms of the disease are similar to those of parathyroid insufficiency, which may include convulsions, laryngeal spasms, development of cataracts, mental retardation, and change of the skin and hair.

In the cases showing symmetrical calcification of the cerebral basal ganglia reported by Camp, the ages of the patients at the onset of the symptoms of parathyroid insufficiency varied from 2½ to 42 years. If the low blood calcium values do influence enamel formation, then one may expect the occurrence of a chronologically altered enamel, to some degree, when hypoparathyroidism occurs prior to the time the enamel is formed. This is in line with Sarnat and Schour's work in which they have stated that the approximate time of a metabolic upset might be estimated by a knowledge of the chronology of tooth formation. Albright said, "When hypoparathyroidism develops before the teeth have entirely formed, one finds aplasia or hypoplasia of the teeth from that point in their development at which the hypoparathyroidism came in. There, if the disease develops in a child at about the twelfth year of age, the teeth will be entirely normal except for blunting of the root ends of the cuspids, premolars, and second molars and hypoplasia of the crowns of the third molars.

Albright and Ellsworth, in 1929, reporting the calcium and phosphorus studies in a case of idiopathic hypoparathyroidism of a boy 14 years of age, stated that the boy had had measles at 5 years, with the first spasm at 9 years. Reference to the teeth was simply "teeth in poor repair."

Drake, Albright, Bauer, and Castleman, in 1939, reviewed 8 cases in the literature and added 6 of their own.

These authors found little of etiologic significance and no hereditary factors. Their criteria for chronic idiopathic hypoparathyroidism were low serum calcium, high serum inorganic phosphorus levels, normal bone texture by roentgenograms, and the absence of renal insufficiency.

Lovestedt reviewed the histories of the 12 patients showing symmetrical calcification of the cerebral basal ganglia reported by Dr. Camp of the Mayo Clinic and added 4 more which were not reported because calcification did not exist at the time of the report.

News and Notes

1951 Meeting of the American Association of Orthodontists

Clinics held at the meeting of the American Association of Orthodontists in Louisville, Ky., April 24, 1951, follow:

1. Simplified Orthodontic Appliance. Orthodontic Frame-plates. Dr. J. A. C. Duyzings, Utrecht, Holland.

2. Treatment of Rotations by Means of Coil Springs. Dr. Pablo Vallhonrat, Havana, Cuba.

3. Some Auxiliaries Used With the Edgewise Mechanism. Dr. Francis J. Loughlin, Jamaica, N. Y.

4. Practical Demonstration of Two Clinical Models of the Bolton Cephalometer. Dr. B. Holly Broadbent, Cleveland, Ohio, and Mr. Charles B. Bolton, Cleveland, Ohio.

5. Treatment Procedures of Simple Form Which Have Proved Their Worth. Dr. George M. Anderson, Baltimore, Md.

6. Kodachromes and the Cephalostat. Dr. Carl Zeisse, Philadelphia, Pa.

7. Practical Points of Value From "The Orthodontic Melting Pot." Dr. Aubrey Sager, Philadelphia, Pa.

8. Sliding Mid-section, End Tubes, and Intermaxillary Hooks in a Modified Johnson Appliance Construction. Dr. C. Weber Volckmer, Williamsport, Pa.

9. Alignment of Buccal Tubes With the Spotwelder. Dr. Michael J. Maxian, Manhasset, L. I.

10. Adjuncts for Stabilization. Dr. L. E. Yerkes, Allentown, Pa.

11. Whitman Elastic Appliances. Dr. Clifford L. Whitman, Hackensack, N. J.

12. Community Orthodontic Service. Dr. August L. Wright, Philadelphia, Pa.

13. Occlusion: A Cardinal Consideration. Dr. Blair C. Madsen, Miami, Fla.

14. Twenty-five Cases Treated According to Philosophy and Technique of Dr. Charles H. Tweed With Records One Year After. Dr. George L. Englert, Danville, Ill.

15. Cephalometrics in Everyday Use. Dr. Thad Morrison, Jr., Atlanta, Ga.

16. How to Treat Class II Extraction Cases With the Edgewise Mechanism, Following Tweed's Philosophy. Tweed Study Group—Asociacion de Ortodoncistas de Cuba Dr. Carlos Coro, Dr. F. Rodriguez de la Rosa, Dr. Margarita Amezaga, Dr. Pablo Vallhonrat, Dr. Dario Gandarias.

17. Cephalometrics. Dr. Samuel Ackerman, Cincinnati, Ohio.

18. Modified Hawley Retainers. Dr. Maynard E. Cook, Austin, Minn.

19. Visual Aids in Orthodontics for New Patients and Parents. Dr. James C. Brousseau, Baton Rouge, La.

20. Palliative Orthodontics—A Partial Denture Used as a Space Maintainer as Well as for Correction of an Anterior Cross-Bite, Showing Retention With no Metal Clasps. Dr. William N. Flesher, Oklahoma City, Okla.

21. Final Phase of Treatment in Deep Overbite Cases. Dr. Lloyd Chapman, Vancouver, B. C., Canada.

22. A Method of Reinforcing Acrylic Retainers. Dr. Herbert G. Frankel, Cincinnati, Ohio.

23. The "Split Tube and Lock" and "The Swirl" Attachments. Dr. Alexander Sved, New York, N. Y.

24. Removable Appliances of Chrome Alloy. Dr. William B. Stevenson, Jr., Amarillo, Texas.

25. A Simple Method of Creating Space for Upper Bicuspids and Cuspids When There Is a Forward Drift or Mesial Tilt of Upper Molars. Dr. Joseph P. Serafino, Beaumont, Texas.

26. Compromise Extraction. Dr. Gerard A. Devlin, Newark, N. J.

27. The Results of Treatment When Employing the Tweed Philosophy and Technique. Dr. Ben L. Herzberg, Chicago, Ill.

28. Orthodontics for the Cleft Palate Patient. Dr. Russell E. Huber, Dayton, Ohio.

29. Classification of Canines and Their Distal Relocation. Dr. Edward Ray Strayer, Philadelphia, Pa.

30. An Auxiliary Labial Appliance. Drs. Alstadt and Smith, Little Rock, Ark.

31. A Simplified Cephalometric Head Positioner. Dr. Alden Weingart, New York, N. Y.

32. Case Reports. Tweed Study Club of Detroit. Dr. C. Edward Martinek, Dr. Louis Braum, Dr. Robert Coleman, Dr. Joseph Grant, Dr. Milton Lappin.

33. Cervical Appliances for Anchorage. Dr. Joseph R. Gould, Cleveland, Ohio.

34. A Correlation of Biologic Principles and Mechanical Appliances in Orthodontic Treatment. Dr. Andrew F. Jackson, Philadelphia, Pa.

35. Cases Two and Three Years After Completion of Treatment. Dr. Bibb Ballard, Dallas, Texas.

36. Overlay Appliance for Expansion in Cases With Deciduous Teeth. Overlay Space Maintainers. Dr. Merlin A. Spain, Omaha, Neb.

37. Orthodontic Aids. Dr. E. W. Tucker, Seattle, Wash.

38. A New, Simple, Positive and Controlled Method for Reciprocal Lateral Expansion Without the Conventional Lingual Arch. Dr. Norris C. Leonard, Nashville, Tenn.

39. Sliding Sleeve Attachment for the Twin Arch Orthodontic Mechanism. Dr. Howard Yost, Grand Island, Neb.

40. Anatomical Exhibit of Human Skulls. Dr. Spencer R. Atkinson, Pasadena, Calif., assisted by: Dr. George Bonne, Dr. Fred West.

41. A Simplified Technique for Attaching Orthodontic Bands in Alginate Impressions. Dr. Olin W. Owen, Charlotte, N. C.

UNIVERSITY CLINICS

University of California Exhibit. University of California.

The Use of the Grid Screen in Cephalometric Roentgenology. St. Louis University.

Adequate University Clinical Teaching. Columbia University.

Interpretation of Cephalometric Roentgenograms.

The Stabilizing Plate as an Adjunct to Anchorage.

A Mechanism for Up-righting Molars and Regaining Space. University of Iowa.

The Guinea Pig Temporomandibular Joint Histology. University of Kansas City.

Clinical Records for Undergraduate Teaching. Emory University.

Application of Fixed Lingual Appliances in the Treatment of Major Malocclusions. Indiana University.

The following is the program conducted by the Committee on Research of the American Association of Orthodontists at the Louisville meeting in April:

Wendell L. Wylie, *Chairman*
J. A. Salzmann
Robert E. Moyers
J. A. Salzmann, New York City, Presiding

10:05 A.M. to 12:00 NOON — 2:00 P.M. to 4:30 P.M.

Facial Growth Standards Based on Cephalometrics. R. M. Nelson, D.D.S., R. H. Ervin, D.D.S., and R. C. Geiger, D.D.S., State University of Iowa.

a. Findings for the 5, 6, and 7 year old group (R. M. Nelson).

b. Findings compared with others reported in the literature (R. H. Ervin).

c. Changes occurring within the group with age (R. C. Geiger).

Further Studies on Mandibular Condyle Movements. G. L. Fraseur, D.D.S., State University of Iowa.

Re-evaluation of the Orbital Plane. R. H. Knarr, D.D.S., State University of Iowa.

The Sella Turcica Size at 4, 5 and 6 Years. R. B. Norris, D.D.S., State University of Iowa.

A Comparison of Class II, Division 1 and Class I (Angle) as Seen in Norma Frontalis. W. W. Paden, D.D.S., and Wendell L. Wylie, D.D.S., University of California.

A Cephalometric Radiographic Study of a Correlation of the Occlusal Vertical Dimension and the Rest Vertical Dimension of the Face in Various Age Groups of Individuals. Philip J. Bright, D.D.S., M.S.D., Northwestern University.

A Radiographic Method of Analysis of the Structures of the Lower Face to Each Other and to the Occlusal Plane of the Teeth. Robert S. Freeman, D.D.S., M.S.D., Northwestern University.

A Radiographic Method of Analysis of the Relation of the Structures of the Lower Face to the Maxillary Plane. Dale F. Rasmusson, D.D.S., M.S.D., Northwestern University.

A Radiographic Study of the Position of the Mandibular Condyle in Individuals Possessing Malocclusion of the Teeth Before and After Orthodontic Treatment. Chester R. Glowacz, D.D.S., M.S.D., Northwestern University.

A Cephalometric Radiographic Investigation of the Skeletal Pattern of a Specific Dentofacial Anomaly. Warren E. Gerger, D.D.S., M.S.D., Northwestern University.

A Study of Tooth Size, Dental Arch Length, and Facial Balance in Cases of Class I Malocclusion. Irving J. Fleet, D.D.S., M.S.D., Northwestern University.

The Regeneration of the Mandibular Condyle Following Bilateral Resection. Joseph R. Jarabak, D.D.S., M.S.D., Northwestern University.

Growth of the Upper Face Following Bilateral Mandibular Condylar Resection. Joseph R. Jarabak, D.D.S., M.S.D., and T. M. Graber, D.D.S., M.S.D., Ph.D., Northwestern University.

Growth of the Mandible of the Rat Following Bilateral Resection of the Mandibular Condyles. Joseph R. Jarabak, D.D.S., M.S.D., and John R. Thompson, D.D.S., M.S., Northwestern University.

Changing Philosophies of Cleft Palate Management. T. M. Graber, D.D.S., M.S.D., Ph.D., Northwestern University.

Alizarin as an Indicator of Bone Growth. Joseph R. Jarabak, D.D.S., M.S.D., and LeRoy Vehe, M.D., Northwestern University.

Radiocalcium Uptake as Compared With Alizarin in the Mineralization of Bone. Joseph R. Jarabak, D.D.S., M.S.D., Northwestern University.

The Uptake of Radiocalcium 45 Ca in the Skull and Face of the Rat. Joseph R. Jarabak, D.D.S., M.S.D., and Maclyn Kamins, M.D., Northwestern University.

The Dentition of the Young Adult American Male. John D. Friedlander, B.D.S., University of Pennsylvania.

Index of Malocclusion in Teen-Age Children. Maury Massler, D.D.S., and John M. Frankel, D.D.S., University of Illinois.

BIOGRAPHY OF THE ESSAYISTS

(In order of their appearance on program)

Blair C. Madsen, D.D.S., 735 Du Pont Building, Miami, Fla. Graduate of Northwestern University in 1933. Article "Occlusion—A Cardinal Consideration" appeared in J. A. D. A., December, 1950. Member Southern Academy of Periodontology. Practice limited to periodontia and equilibration of occlusion.

Elam Harris, D.D.S., F.I.C.D., Suite 607-608 Fincastle Building, Louisville 2, Ky. Attended the School of Dentistry of the University of Louisville, where he received the degree of Doctor of Dental Surgery in 1912. He is a diplomate of the American Board of Prosthodontics, and is a member of the following dental organizations: The American Dental Association, Kentucky State and Louisville District Dental Associations, American Denture Society, Academy of Denture Prosthetics, International College of Dentists, and Delta Sigma Delta Fraternity. He is the author of many articles that have appeared in various dental and medical journals in the United States and foreign countries. He collaborated with Dr. Louis Block, Louisville, Ky., in writing a chapter discussion, "Occlusion in Relation to the Temporomandibular Joint," in the second edition of Complete Dentures by Merrill G. Swenson. He has appeared as essayist and clinician on many dental and medical programs throughout the United States.

B. Holly Broadbent, D.D.S., F.A.C.D., School of Medicine, Western Reserve University, Cleveland 6, Ohio. Director of the Bolton Fund for the study of the development of the Face

of the Normal Child, School of Medicine; Professor of Dentofacial Morphology, School of Dentistry; Western Reserve University, Cleveland, Ohio.

Leuman M. Waugh, D.D.S., 931 Fifth Ave., New York, N. Y. Graduate, D.D.S., University of Buffalo, 1900; Postgraduate study in Histology, Embryology, and Pathology, 1901-02-03, at University of Buffalo; Professor of Histology, Embryology, and Microscopy, 1901-1912, University of Buffalo; Professor of Special Pathology, 1904-1914, University of Buffalo; Fellow of the Governing Faculty, 1908-1914, University of Buffalo. Resigned and moved to New York City for private practice limited to orthodontics. Member of the Organization Committee for School of Dentistry, Columbia University, 1915-1917; Professor of Pathology, School of Dentistry, 1917; Member and Secretary of Administrative Board, School of Dentistry, 1918; Change of title, 1919: Professor of Histology and Embryology; Change of title, 1922: Professor of Orthodontia; 1926, Associate Director of the School of Dental and Oral Surgery; 1927, Director of the Orthodontia Clinic for Graduate Study; 1927, change of title: from Associate Director to Associate Dean of the School of Dental and Oral Surgery; 1945, Retired (age). Honorary Professor, Faculty of Dentistry, University of Montreal. Charter member, President and Trustee of the International Association for Dental Research; Fellow of the American Association for the Advancement of Science; Past-President of the American Association of Orthodontists; Founder, member, and president of the Northeastern Society of Orthodontists; Past-president of the Dental Society of the State of New York and recipient of its Jarvie Fellowship Medal; Past-President of the New York Academy of Dentistry; Supreme Past-President of Xi Psi Phi Fraternity; Member of Omicron Kappa Upsilon and Sigma Xi honorary fraternities; Hon. President, Second International Orthodontic Congress, London, England; Dental Director (Reserve), United States Public Health Service (Retired); Director, American Board of Orthodontics.

J. A. C. Duyzings, D.D.S., Hamburgerstraat 19, Utrecht, Holland. Received his dental education at the University of Utrecht—1920-1924. Courses in orthodontics with Professor Korkhaus at Bonn. Private instructions in Embryology, Anatomy of the Head, and Microscopic Embryology. For a number of years taught at the University of Utrecht and former deputy examiner for the orthodontic department. Since 1937 he has given courses each year in orthodontics before dentists in different places of the Netherlands in charge of the W.T.A. (Scientific Dental Work); in all, 40 courses. Extensive lecturer and writer on orthodontic and related sciences; member of the European Orthodontic Society; contributor to "Fortschritte der Orthodontik (Korkhaus); member of the Federation Dentale Internationale; Dutch Dental Fraternity Board of the Society of Netherlands Dentists; Treasurer of "Scientific Dental Work"; President and founder of the "Dutch Society for the Study of Orthodontics"; Titular foreign member of the French Orthodontic Society; Contributor to the international review for orthodontics, published by Dr. de Coster 1947: "Archives d'Orthodontics"; President Ivory Cross II; member of Society for the advance of physics, medicine, and surgery; received the Medal of Honour for scientific work of the Dutch Association of Dentists; St. Moritz. Vice-President, European Orthodontic Society; Vice-President Utrecht of the Dutch Association for the advance of dentistry; Secretary Utrecht of the Dutch Society for the advance of dentistry; member of the managing committee of the Dutch Society for the advance of dentistry; president of the health insurance commission; honorary member—section Utrecht—of the Netherlands Dental Association; president of the commission for school-dentistry, section Utrecht.

Delegate to the managing committee of the Dutch Society for the advance of dentistry; member German occupation: assistant on the war department for jaw surgery under the auspices of the Dutch Red Cross; member of the Commission for feeding of children of Utrecht; leader section infant-feeding; member of the Commission for purchase and transport of that Committee; Commander of the Utrecht Underground Movement, "Auxiliary Police" (1,000 men); leader of the Commission for the reorganization of the Dutch Association for the advance of dentistry, introduced by 3 Utrecht dentists (1943); Secretary of the Underground Group "Werkgroep Hut." After the liberation he was Vice-President of the Committee,

"Erection of a monument for the victims of the resistance of the town of Utrecht during the German occupation." Vice-President of the Board Province of Utrecht "Community of members of the former Underground Movement." (Dr. Duyzings has been designated official representative of the European Orthodontic Society to our meeting.)

J. H. Sillman, D.D.S., 667 Madison Ave., New York, N. Y. Associate visiting dentist, Bellevue Hospital, New York City. Orthodontic Consultant, New York Infirmary; From the Department of Dentistry, Bellevue Hospital, and the Department of Obstetrics and Gynecology and Pediatrics of New York University College of Medicine.

Wilton Marion Krogman, Ph.D., University of Pennsylvania, Philadelphia, Pa. Professor of Physical Anthropology, Graduate School of Medicine and Evans Institute of Dentistry, University of Pennsylvania; Director, Philadelphia Center for Research and Child Growth; Chairman, Committee on Research Council; Viking Medal and Award for outstanding work in Physical Anthropology for 1950; Author, "The Growth of Man" 1941. President, American Association of Physical Anthropologists, 1945-1949.

G. H. Terwilliger, D.D.S., F.A.C.D., 1624 Franklin St., Oakland 12, Calif. Graduate, Class of 1919, University of California, College of Dentistry. After the close of his school, Dr. Edward H. Angle recommended a course of study to be given by his graduates, Dr. George Hahn, Dr. Linus Huberty, and Dr. Ernest Setzer. At the completion of this course, he was invited to spend time with Dr. Angle at his home for further study. Member of the staff of University of California, College of Dentistry, Division of Orthodontia, for a period of eighteen years; elected to Fellowship in the American College of Dentists, 1945; active in the development of the Charles H. Tweed Foundation for Orthodontic Research; member of the Edward H. Angle Society of Orthodontia, and American Society of Orthodontists.

Kyrle W. Preis, D.D.S., F.A.C.D., 700 Cathedral St., Baltimore, Md. Graduated from the Baltimore College of Dental Surgery, Dental School, University of Maryland, in 1929. Associated with Dr. Harry E. Kelsey from 1929-1935. A former instructor and special lecturer in orthodontics from 1931-1945; discontinued teaching at that time to serve as Secretary of the Maryland State Board of Dental Examiners until 1949. A Past-President of the Baltimore City Dental Society and the Washington-Baltimore Society of Orthodontists, Fellow in American College of Dentists, also a member of Omicron Kappa Upsilon; present status, Professor of Orthodontics at the Dental School, University of Maryland, and Orthodontist at Johns Hopkins Hospital.

Clifford L. Whitman, D.D.S., F.I.C.D., 268 Moore St., Hackensack, N. J. Instructor in Orthodontics, Columbia University; Dental Consultant, Hackensack Hospital; member of the American Society of Orthodontists; Northeastern Society of Orthodontists; Angle Society of Orthodontists; permanent member of the Tweed Seminar; Strang-Tweed Study Group in Orthodontics; Federation Dentaire Internationale; fellow member of the Academy of Medicine of Northwestern New Jersey; fellow member of the International College of Dentists; Columbia Alumni Association; American Dental Society; Bergen County Dental Society; and Society for the Advancement of General Anesthesia (1930-1934). Author of numerous papers and clinician before orthodontic and pharmaceutical groups.

Gerald J. Cox, Ph.D., University of Pittsburgh, Pittsburgh, Pa. Since September, 1948, he has been professor and director of dental research. B.S. in Chemical Engineering, M.S. and Ph.D. in Physiological Chemistry at the University of Illinois in 1919, 1922, and 1925, respectively, led to four years of employment by his alma mater to teach biochemistry as a lab patrolman. He is a member of the American Chemical Society, American Society of Biochemists, American Institute of Nutrition, International Association for Dental Research, American Association for Advancement of Science, Institute of Mathematical Statistics, Biometric Society, American Public Health Association and one of four associate members of the American Dental Association. (Dr. Cox would be willing to be appointed to the office of Vice-President in Charge of Sympathetic Interest in Orthodontics.)

William H. Day, Lt. Col., Dental Corps, U. S. Army, Walter Reed Army Hospital—Dental Clinic, Washington, D. C. Graduated from Washington University, St. Louis, 1935. Entered the military service in 1937 with first station at Walter Reed Army Hospital, and has since been stationed at various army posts in the United States. During World War II was assigned to the European Theatre of Operations as Oral Surgeon and Chief of Dental Service, 298th General Hospital (and affiliated unit from the University of Michigan). Attended the Graduate School of Orthodontics, University of Kansas City, 1947. Since then has served as Chief of Orthodontic Section, Walter Reed Army Hospital, and as lecturer to the Graduate Dental School, Army Medical Center, Washington, D. C. Has appeared as clinician on orthodontic subjects before the Postgraduate Meeting of Washington, D. C.; The Maryland State Dental Society; The American Dental Association; The Northeastern Society of Orthodontists; and various other organized meetings of dental groups.

C. W. Carey, D.D.S., 616 University Ave., Palo Alto, Calif. Lecturer and faculty member of the University of California. Has been engaged in private clinical research programs for many years in the field of treatment mechanics and diagnostic aids in the form of classification and assessment of treated material. These studies have resulted in the publication of articles or original contributions in the following: *American Dental Journal*, December, 1938, "Photography for the Orthodontist"; *Angle Orthodontist*, October, 1944, "Force Control in the Movement of Dental Structure"; AMERICAN JOURNAL OF ORTHODONTICS, January, 1947, "Principles and Mechanics of Treatment With the Sliding Twin Section Mechanism"; AMERICAN JOURNAL OF ORTHODONTICS, October, 1949, "Linear Arch Dimension and Tooth Size." Conducted postgraduate courses at universities. Essayist at many sectional meetings and national meetings at Colorado Springs, 1945, and New York, 1949. Hobby—music. Plays several instruments and composes music.

William B. Downs, D.D.S., M.S., Graham Building, Aurora, Ill. Professor of Orthodontia, Department of Orthodontia, University of Illinois. Research studies in facial pattern and growth. Prize essay, A.A.O., 1948, "Variations of Facial Relationships, Their Significance in Treatment and Prognosis."

Ashley E. Howes, D.D.S., F.A.C.D., 650 Main St., New Rochelle, N. Y. In past twenty-five years has appeared on program of A.A.O. on several occasions. Has read papers and presented clinics before various sectional societies, study clubs, and orthodontic alumni organizations. Twenty of these presentations have been published in the JOURNAL. A recipient of the Ninth District medal of honor.

Elmer Lee Henderson, Surgeon, 1110 Francis Bldg., Louisville, Ky., M.D., University of Louisville, 1909. General surgery in Louisville since 1911. Member of staffs of Kentucky Baptist Hospital and St. Joseph Infirmary; member of consultant staff of S. S. Mary and Elizabeth Hospital; on courtesy staff of all other private hospitals in Louisville; specific surgical consultant to the Air Surgeon's Office, U. S. Army, since June, 1942. Was chairman of the Fifth Service Command Committee, Procurement and Assignment Service for Physicians, Dentists, and Veterinarians, 1942-1946; served as Lieutenant, Captain, and Major in Medical Corps, World War I, Lieutenant Colonel in the Medical Reserve Corps, 1919-1929; member of Board of Governors of Kosair Crippled Children Hospital; Southeastern Surgical Congress, President 1946-47; Southern Medical Association, President 1946-47; President of American Medical Association, June, 1950; diplomate of the American Board of Surgery; Fellow of the American College of Surgeons; Kentucky State Medical Association, president 1941-42; Jefferson County Medical Society, president 1918; President of the World Medical Association, October, 1950. Honorary fellow of the Societa Piemontese di Chirurgia; honorary fellow of the International College of Surgeons; member of mission to Japan to survey and make recommendations on social security, medical education, medical service, and public health, 1948; honorary fellow of the recently organized Japanese Medical Association; Alumni Association of the University of Louisville, President, 1938-41; member of Board of Overseers of the University of Louisville; Honorary Alpha Omega Alpha; author of numerous surgical papers. Has traveled extensively in Europe, North America, South America, and the Orient.

Wm. K. Keller, Professor of Psychiatry, University of Louisville, Louisville, Ky. Faculty Member 1938-42, 1946-51, interrupted by World War II service in U. S. Navy, 1942-46. A.B., M.D., University of Louisville. Specialty training, Johns Hopkins Hospital, New York Hospital, Rockefeller Fellowship abroad. Diplomate, Amer. Bd. Psych. and Neur.; Fell., Am. Coll. Physicians, Am. Psych. Assoc., and Southern Psych. Assoc. Member many other national and local scientific societies.

SESSIONS OF AMERICAN ASSOCIATION OF ORTHODONTISTS

Year	*Presidents*	*Secretaries*	*Places of Meeting*
1901	Edward H. Angle	Milton T. Watson	St. Louis
1902	Edward H. Angle	Milton T. Watson	Philadelphia
1903	Milton T. Watson	Anna Hopkins	Buffalo
1904	Lloyd S. Lourie	Anna Hopkins	St. Louis (Int'l Dental Cong.)
1905	Lloyd S. Lourie	Anna Hopkins	Chicago
1906	R. Ottolengui	Frederick S. McKay	New York
1907	Herbert A. Pullen	Frederick S. McKay	Detroit
1908	Charles A. Hawley	Frederick S. McKay	Washington
1909	Frank M. Casto	F. C. Kemple	Cleveland
1910	B. Frank Gray	F. C. Kemple	Denver
1911	Alfred P. Rogers	F. C. Kemple	Boston
1912	Milton T. Watson	F. C. Kemple	Chicago
1913	B. E. Fischer	F. C. Kemple	Chicago
1914	Guy B. Hume	W. E. Walker	Toronto
1915	Frederick C. Kemple	W. E. Walker	San Francisco
1916	Frederick C. Kemple	F. M. Casto	Pittsburgh (Int'l Dental Cong.)
1917	M. N. Federspiel	F. M. Casto	Excelsior Springs
1918	D. Willard Flint	F. M. Casto	Chicago
1919	O. W. White	F. M. Casto	St. Louis
1920	John V. Mershon	F. M. Casto	Chicago
1921	J. Lowe Young	Ralph Waldron	Atlantic City
1922	Martin Dewey	Ralph Waldron	Chicago
1923	Burt Abell	W. H. Ellis	Chicago
1924	Ralph Waldron	W. H. Ellis	Kansas City
1925	Clinton C. Howard	W. H. Ellis	Atlanta
1925	William C. Fisher	W. H. Ellis	New York (First Int'l Ortho. Cong.)
1927	Joseph D. Eby	Charles R. Baker	Chicago
1928	Walter H. Ellis	Charles R. Baker	Buffalo
1929	Albert H. Ketcham	Charles R. Baker	Estes Park
1930	Oren A. Oliver	Charles R. Baker	Nashville
1931	Harry E. Kelsey	Claude R. Wood	St. Louis
1932	Charles R. Baker	Claude R. Wood	Toronto
1933	W. E. Flesher	Claude R. Wood	Oklahoma City
1935	L. M. Waugh	Claude R. Wood	New York
1936	H. C. Pollock	Claude R. Wood	St. Louis
1937	P. G. Spencer	Claude R. Wood	Chicago
1938	James D. McCoy	Claude R. Wood	Los Angeles
1939	Frank A. Delabarre (Posthumously)		
1939	Harry A. Allshouse, Jr.	Claude R. Wood	Kansas City
1940	William A. Murray	Claude R. Wood	Chicago
1941	Henry U. Barber, Jr.	Max E. Ernst	New York
1942	Claude R. Wood	Max E. Ernst	New Orleans (Inter-American Cong.)
1944	James A. Burrill	Max E. Ernst	Chicago
1946	Archie B. Brusse	Max E. Ernst	Colorado Springs
1948	Earl G. Jones	Max E. Ernst	Columbus, Ohio
1949	Lowrie J. Porter	George R. Moore	New York
1950	Max E. Ernst	George R. Moore	Chicago
1951	Joseph E. Johnson	George R. Moore	Louisville, Ky.

ANNUAL GOLF GAME

The results of the annual golf game of the members of the American Association of Orthodontists follow.

The match was held at the Big Springs Golf Club in Louisville, Ky. An attendance of 60 was recorded.

Members who tied for low gross were as follows:

Dr. Wm. Weichselbaum, Jr.	Savannah, Ga.
Dr. Martin Snyderman	Pittsburgh, Pa.
Dr. James J. Guerrero	Chicago, Ill.

Members who tied for low net were as follows:

Dr. Sidney Riesner	New York, N. Y.
Dr. A. C. Broussard	New Orleans, La.
Dr. Ashley Howes	New Rochelle, N. Y.
Dr. J. H. Green	New York, N. Y.

Dr. Burk Coomer acted as Chairman of the Golf Committee, and all reported a marvelous day.

International Luncheon of the 1951 Meeting of American Association of Orthodontists

The annual International Luncheon was held in the Mirror Room of the Kentucky Hotel in Louisville, Wednesday, April 25. The luncheon was directed and arranged by the Interrelations Committee, which is composed of:

Dr. John W. Richmond, of Kansas City, Mo.
Dr. E. C. Lunsford, of Miami, Fla.
Dr. Gerald Franklin, of Montreal, Quebec, Canada.

Dr. Richmond was master of ceremonies. A number of the visitors from foreign countries made short talks. Those who did not talk were introduced, and were greeted by the members of the Association.

Those from foreign lands who were presented are as follows:

Dr. L. Olive Cole, Winnipeg, Canada
Dr. Aila Ravila, Helsinki Mechelinink, Finland
Dr. M. R. Culbert, Toronto, Canada
Dr. Holly Halderson, Toronto, Canada
Dr. Chas. Williams, Ontario, Canada
Dr. A. W. Oliver, Montreal, Canada
Dr. Lorne Riddolls, Toronto, Canada
Dr. K. W. Shultis, Toronto, Canada
Dr. John Abra, Winnipeg, Canada
Dr. Lloyd Chapman, Vancouver, B. C.
Dr. Gerald Franklin, Montreal, Canada
Dr. B. Dixon, Ottawa, Ontario, Canada
Dr. H. E. Leslie, Toronto, Canada
Dr. R. R. McIntyre, Calgary, Canada
Dr. Vernon Fisk, Toronto, Canada
Dr. Carlos Coro, Habana, Cuba
Dr. Pablo Vallhonrat, Habana, Canada
Dr. Dario Gandarias, Habana, Cuba
Dr. Federicorde Larosa, Habana, Cuba
Dr. Jose M. Bartes, Habana, Cuba
Dr. Yolanda Buch, Habana, Cuba
Dr. Margarita Coro, Habana, Cuba
Dr. Robert C. Sample, Honolulu, Hawaii
Dr. Antonio Jaimes, Caracas, Venezuela
Dr. Jose Araujo, Caracas, Venezuela
Dr. Victor Boetiner, Paraguay
Dr. J. A. C. Duyzings, Holland

Great Lakes Society of Orthodontists

The Twenty-second Annual Meeting of the Great Lakes Society of Orthodontists will be held Nov. 5, 6, and 7, 1951, at the Statler Hotel, Cleveland, Ohio.

Southern Society of Orthodontists

The Southern Society of Orthodontists will meet at the New Greenbrier Hotel, White Sulphur Springs, Va., July 29, 30, and 31 and August 1, 1951.

The tentative schedule follows:

Sunday, July 29

Golf tournament
Cocktails
Dinner

Monday, July 30

Meeting of Executive Board and Committees
Registration
Tour of hotel
Luncheon
Official opening of meeting
Scientific session
Mint julep party
Dinner

Tuesday, July 31

Scientific and business session
Luncheon
Scientific session
Ladies' Bridge and Canasta
Cocktails
Dinner

Wednesday, August 1

Scientific session
Luncheon
Scientific and business session
Adjournment

HEADQUARTERS

The New Greenbrier Hotel, White Sulphur Springs, W. Va., is one of the nation's most beautiful resorts. Established in 1778, when its famous waters were first discovered, the resort has been host to thirteen Presidents of the United States, to two Kings, and over a million visitors and tourists from all over the world. This is indeed America's smartest vacation wonderland.

SCIENTIFIC PROGRAM

Your program committee has secured an outstanding scientific program. Dr. Leland Daniel has secured as our essayists Dr. John R. Thompson, Dr. George Anderson, and Dr. Joseph Jarabak.

Dr. Olin Owen has obtained the following men to give case reports: Dr. James C. Brousseau, Dr. William A. Buhner, Dr. Herbert D. Jaynes, and Dr. William J. Turbyfill.

Dr. Leigh Fairbank has obtained table clinics from the following men: Dr. William H. Oliver, Dr. Andrew F. Jackson, Dr. Thad Morrison, Jr., Dr. Orville O. Van Deusen, Dr. E. C. Lunsford, Dr. H. K. Terry, Dr. R. B. Clark, Dr. Faustin N. Weber, and Dr. Amos S. Bumgardner.

Subjects of the essayists and titles of the case reports and table clinics will be, of course, listed and elaborated upon in the official program which you will receive in the near future.

Additional high lights of our program will be a talk by Dr. Bernard G. DeVries, President of the American Association of Orthodontists, and a short talk by Dr. James E. Johns, Sr., Trustee of the American Dental Association.

Certification of Specialists

In a Bill recently introduced in the State of Maine, S. P. 481 (L. D. 1144), among other provisions is the following:

> The bill would incorporate a new section governing the certification of dentists desiring to announce themselves as specialists. The board is directed to establish higher qualifications for dentists applying for certification and would be authorized to require an examination in any special field as a condition of certification. A fee of $50 would be charged each applicant. Another type of special permit could be issued by the board to dentists not yet licensed who wish to practice exclusively as interns.

Another Bill in the State of New York, A. 1857, proposes to regulate the operations conducted by dental laboratories and technicians. It would add five new sections to the dental practice act provisions of the New York Education Law.

The State Education Department would be authorized to administer the new regulations aided by an advisory board on dental laboratories and technicians to be appointed by the Commissioner of Education. The Board would be composed of five members: three technicians and two dentists. One of the dentists would be a member of the board of dental examiners.

The proposal would control the operations of dental laboratories, dental technicians, and apprentice technicians.

Ohio State University, College of Dentistry

United States Senator Lester Hunt headed a distinguished list of dentists participating in the Post-College Assembly of the Ohio State University College of Dentistry, held May 14 to 16 in connection with the dedication of the new university Health Center.

Details of the dentistry phase of the dedication events were announced recently. Special programs also were planned by the College of Medicine and the School of Nursing. Formal dedication of the new Health Center was scheduled for 11 A.M., Tuesday, May 15.

Senator Hunt, of Wyoming, and the only dentist in the United States Senate, delivered two major addresses. First of these was at the dentistry dedication banquet at 7 P.M. Monday in the Neil House ballroom. Dean Wendell D. Postle, of the College of Dentistry, presided.

Senator Hunt spoke again Tuesday morning in the Ohio Museum Auditorium, discussing the subject, "Health Legislation and the Universities." Also speaking at that time were Dr. Richard Meiling, Chairman of the Armed Forces Medical Policy Council.

Orthodontic Club, Toronto, Concludes Successful Season

The Orthodontic Club, Toronto, has just concluded its twenty-third season with one of the most successful programs since its inception. Eminent orthodontists who were visitors at the progressive Department of Orthodontics, Faculty of Dentistry, University of Toronto, were essayists of the club and presented subjects of unusual scope and interest.

On October 12 the essayist was Dr. John Heath, Melbourne, Australia, who presented his philosophy of orthodontic therapy.

At the November meeting the guest essayist was Dr. Alfred Paul Rodgers, Boston. Following a dinner in his honor, on November 8, Dr. Rodgers was made an honorary member of the Club and is the fourth recipient of this honor. In his address of acceptance Dr. Rodgers referred with feeling to his two years' undergraduate tuition at the University of Toronto.

On this occasion, Dr. Ernest Ballard, Director of Research, Post Graduate School, London, England, was also present and participated in the question and answer forum conducted by Dr. Rodgers upon the subject "Myotherapeutic action of the facial musculature and the mandibular articulation."

Dr. William Olin, Iowa City, Iowa, was the speaker at the meeting on December 7 and presented a paper illustrated by lantern slides on the subject of cleft palate therapy.

On January 30 Dr. Paul Husted, Inglewood, Calif., was the clinician, and gave an interesting presentation of the accessories used with the universal appliance in orthodontic therapy.

The essayist at the meeting on March 16 was Dr. Robert E. Moyers, Professor of Orthodontics, Faculty of Dentistry, University of Toronto. Dr. Moyers presented a paper on mixed dentition analysis, stressing the diagnostic value of tooth size and sequence of eruption.

Other activities of the club during the year included financial support toward the establishment of the Grieve Memorial Library in the Department of Orthodontics, Faculty of Dentistry, University of Toronto, and a motion picture study of an unusual case which permitted an open view of the muscles of speech, deglutition, and mastication.

Dr. Colton Bliss, President, and the other executive officers were the recipients of hearty congratulations from the members of the club at the conclusion of the final meeting for the season on April 11.

The newly elected officers for the season 1951-1952 are as follows:

Past President	Dr. Colton Bliss
President	Dr. Lorne Riddolls
Vice-President	Dr. Harold E. Leslie
Secretary-Treasurer	Dr. J. T. Crouch

Denver Summer Seminar

The Denver Summer Seminar for the advanced study of Orthodontics will be held the week of Aug. 5 to 10, 1951, at the Park Lane Hotel, Denver, Colo.

Speakers will be:

Wilton M. Krogman, University of Pennsylvania, Philadelphia, Pa.
J. A. Salzmann, New York, N. Y.
Henry Glupker, Chicago, Ill.
Malcolm R. Chipman, Spokane, Wash.

The officers of the Denver Summer Seminar for 1951 are:

Martin J. Mayeau, Chairman, Wheaton, Ill.
Elmer S. Linderholm, 1558 Humboldt, Denver 6, Colo.

Florida Study Club

The following is an excerpt of the program presented to the Florida Orthodontic Study Group by Dr. Oren A. Oliver, of Nashville, Tenn., and Dr. H. K. Terry, of Miami, Fla., Feb. 12, 13, and 14, 1951.—*Ed.:*

Basic Theory of Labiolingual Technique
Direct Molar Band Technique (Slides)
Construction of Lingual Appliances (Slides)
Lingual Auxiliary Attachments (Slides)
Construction of Labial Appliances (Slides)
Principles of Oliver Guide Plane
Construction of Guide Plane (Slides)
Construction of Guide Plane
Step by Step
The Guide Plane and the Temporomandibular Joint
Step by Step
Construction of Guide Plane
Cases: Diagnosis and Treatment Planning
Movie on Guide Plane
Diagnosis and Treatment Planning, Dr. Boyd W. Tarpley, Birmingham, Ala.

Erratum

In the April, 1951, issue of the JOURNAL, all of the graduate orthodontic courses that are connected with dental schools in America were listed.

In the case of the State University of Iowa, the time or requirements for graduation were not clear.

The University of Iowa course consists of fourteen months full time with no scheduled vacations. The students are enrolled for two summer sessions and an academic year.

Notes of Interest

Dr. Harold L. Brehm announces the opening of his office at 12-13 Berdan Ave., Fair Lawn, N. J., practice limited to orthodontics.

Robert E. Hennessy, D.D.S., announces the removal of his office to 8013 Maryland Ave., Clayton, Mo., practice limited to orthodontics.

Dr. Frederick B. Noyes announces the removal of his office to 621 Park Place, Park Ridge, Ill.

Cornelia M. Thompson, D.D.S., announces the removal of her office to Suite 104 Brown Bldg., 101 South Meramec Ave., Clayton 5, Mo., practice limited to dentistry for children.

J. Romald White, D.D.S., announces the removal of his office from 805 First National Bank Bldg., to 535 Jefferson Bldg., Peoria, Ill., practice limited to orthodontics.

D. G. Andronaco, D.M.D., announces the opening of his office at 16 North Goodman St., Rochester 7, N. Y., practice limited to orthodontics.

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The AMERICAN JOURNAL OF ORTHODONTICS is the official publication of the American Association of Orthodontists and the following component societies. The editorial board of the AMERICAN JOURNAL OF ORTHODONTICS is composed of a representative of each one of the component societies of the American Association of Orthodontists.

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